DOCUMENT RESUME

ED 061 591 EA 004 170

TITLE	There's a New School Coming. Third Annual Report: The Florida Educational Research and Development Program.
INSTITUTION	Florida State Dept. of Education, Tallahassee.
PUB DATE	13 Jan 72
NOTE	49p.
AVAILABLE FROM	Dr. Ned B. Lovell, Administrator, Educational Research and Development Program, Division of Elementary and Secondary Education, Florida State Department of Educ., Tallahassee, Florida 32304
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Educational Accountability; Educational Change; Educational Programs; Educational Research; *Educational Strategies; *Evaluation Techniques; Management; Management Development; *Program Coordination; Research and Development Centers; School Personnel; *Staff Improvement; Teacher Education; Teaching Skills
IDENTIFIERS	Assessment

ABSTRACT

This program is designed to make the concept of the new school possible -- one that provides a variety of learning situations and guarantees learning opportunities for all individuals. The report makes recommendations in four areas that foster the new school concept: (1) technical assistance and evaluation support for school-based projects using alternative practices; (2) completion of assessment for mathematics, writing, and reading and development of programs in learning skills, science, and human relations; (3) expansion of assessment procedures and training methods for educational personnel and new projects relating teacher competencies to pupil learning; and (4) coordination of research and development activities under several programs. (RA)

ED 061591

JANUARY 13/1972
THIRD ANNUAL REPORT

THERE'S A NEW SCHOOL COMING

THE FLORIDA EDUCATIONAL RESEARCH
AND DEVELOPMENT PROGRAM

EA 004 170

RECEIVED
MAR 15 1972
Florida Educational
Resources Information Center
Department of Education

TABLE OF CONTENTS

I.	There's a New School Coming	1
II.	There is Always a Way	5
III.	If You can't Tell Whether the School is Serving the People, the People May Be Serving the School	9
IV.	Helping the Helpers	15
V.	Orchestrating Educational Research and Development	19

APPENDICES:

A.	Letter from Floyd T. Christian, Commissioner of Education	A-1
B.	Letter from Leon M. Lessinger, Chairman, Board of Governors	B-1
C.	Membership of the Board of Governors and Advisory Council	C-1
D.	Legal Authorization for the Florida Educational Research and Development Program	D-1
E.	Notes on the Florida Educational Research and Development Program—1969 – 72	E-1
F.	R & D Projects Supported in 1970 – 71 and 1971 – 72	F-1
G.	Technical Specifications for Catalogs of Objectives and Assessment Items	G-1
H.	Policy for Budgeting State Support for Educational Research and Development in the State Universities	H-1
I.	Fund Sources for R & D in the Department of Education	I-1

CHAPTER I

THERE'S A NEW SCHOOL COMING

There's a new school coming. But it's not a single building. Not a design for a new type of building. Not a single faculty. Not a new design for school staffing. Not a specified type of learning experience. Not a new system for scheduling pupils.

There is a *new concept of school* coming. It may have self-contained classrooms or no classrooms. It may have certified teachers, uncertified teachers, peer teachers, or no teachers. It may have large group instruction, small group instruction, or self-instruction.

The new concept of school focuses on learning—purposeful learning. Obviously, the concept of a school focused on learning is not new. However, the types of learning situations which predominate in schools are limited. A visit to classrooms in the North, South, East, and West will reveal very similar instructional practices. Moreover, all pupils in individual classrooms will invariably be engaged in the same learning activities. This pattern continues for 180 days each year, following which the schooling for that year is complete.

In building a new concept of school for purposeful learning, school years of 180 days and uniform classroom practices are not automatically eliminated. They are simply viewed from a different perspective. They are viewed in terms of their purposes.

The school must serve society; it must also serve each individual. To serve society, the school must identify and implement learning procedures which are effective with every pupil. Neither limited home experiences nor limited aptitude should excuse schools from providing learning experiences which enable every child to master minimal skills required by society. Needless to say, schools will not find one set of instructional methods which assure learning for each pupil. The new concept of school allows many methods and organizational practices—including some which are counter to current State regulations.

The school's responsibility to society includes an obligation to each individual. The school must continually strive to provide each individual with opportunities to select his own learning objectives. In other words, the school must focus on learning which is purposeful to each individual, as well as that which is deemed minimal from the standpoint of society. This suggests that society should not impose learning objectives on any individual unless those objectives are considered essential by society.

Once provisions for achieving society's minimal objectives have been made, the school must provide opportunities for each student to learn—or not to learn as he and his parents may decide—those subjects or topics which are germane to his interest and aspirations.

The new concept of school provides whatever alternative learning situations are required so that each individual masters the skills which are expected by society. At the same time, the school provides each individual with opportunities to master additional skills and knowledge consistent with his interests and aspirations. However, students are not required to participate in instructional activities mandated by a middle class ethic or by traditional disciplines when such learnings are not considered minimal by society.

The Florida Educational Research and Development Program

The Florida Educational Research and Development Program is designed to make the new concept of school possible. The legislation specifies that funds allocated to the R & D Program shall be "for the sole purpose of sponsoring the designing, development, testing, and evaluation, on a pilot project basis, of applied or action research studies or projects which seek information on questions of critical concern to present and future educational needs of this State" (Section 229.561, Florida Statutes). The same legislation charges the Board of Governors to "make recommendations to the Commissioner for establishing a program for educational research and development . . .".

In the First Annual Report, issued in 1970, the Board recommended a comprehensive program of educational research and development to the Commissioner of Education. The Commissioner endorsed the program and presented it to the Legislature with a budget request of $1,877,000. A $1,200,000 appropriation was enacted

to support R & D projects beginning in the 1970-71 school year. Those projects are being completed at the time this Report is being written. A listing of all projects is presented in Appendix F. Discussions of selected projects appear throughout the Report.

The Board issued the Second Annual Report in 1971. This report recommended to the Commissioner of Education a more focused Educational Research and Development Program, with an emphasis on the development of assessment techniques, the demonstration and evaluation of alternative educational practices, concentrated developmental work with new management techniques, and the development of new procedures for training educational personnel. The recommended budget was $4,000,000. The Commissioner endorsed the program and presented it to the Legislature. A $1,350,000 allocation resulted. With the amount of funds available inadequate to conduct the proposed program, the Department of Education conducted a comprehensive analysis of all sources of R & D funding in the Department. It was ultimately determined that the legislated R & D Program could not operate as an independent program as initially conceived. Instead, close coordination with such programs as Vocational Research and Title III of the Elementary and Secondary Education Act is necessary. All plans for supporting broad scale demonstrations of alternative educational practices under the Educational Research and Development Program were curtailed. Instead, that Program is producing the various components required by a new condept of school—new instructional techniques, new assessment techniques, and new personnel training techniques. These will then be assembled and demonstrated in other programs.

As this Report is being written, some proposals for projects to be conducted under the 1971-72 R & D allocation are still being reviewed. The 1971-72 projects, a majority of which are continuations of 1970-71 projects, are also listed in Appendix F.

Targets for the Educational Research and Development Porgram

In the Second Annual Report, the Board proposed three targets relating to educational assessment and management, educational personel training, and alternative educational practices. All three of these targets are considered fundamental to the new concept of school. The targets are reviewed below and discussed in the light of further experience. also, a fourth target relating to coordination (orchestration) of R & D is proposed.

Coordination of R & D

By the end of 1972, all R & D conducted under the auspices of the Department of Education, including that conducted in the State University System, will be coordinated for the purpose of achieving State R & D goals.

This is a new target proposed by the Board on December 11, 1971. It was precipitated by the substantial differences between recommended budgets for R & D and actual appropriations. Such an action is necessary to achieve State R & D goals, as expressed in this Report. The recommended coordination need not affect the locus of responsibility for administration of individual programs. It does require a mission statement for each separate R & D program, a system for communication between programs, and reports to policy makers showing contributions of individual programs to State R & D goals.

Assessment and Management Techniques for Local Use

By the end of 1972, techniques for improving educational management will be available and readily accessible to all school districts in Florida. These will include techniques for (a) obtaining criterion-referenced measures of pupils achievement in grades K-6 in basic skill areas taught in those grades, (b) obtaining detailed analyses of educational costs, and (c) obtaining analyses of the effectiveness of resource utilization, with recommendations for improvement.

This target is not unreasonable, provided that "readily accessible" means that the raw materials are available in the Department of Education. The necessary criterion-referenced measures in grades K-6 for reading, written communications, and mathematics will be available; a cost analysis system will be available; and, a system for analyzing the effectiveness of resource utilization will be available. In addition, systematic procedures for training personnel to use these resources will be available.

It is anticipated, however, that a means for diffusing these resources for general use will not be developed before the fall of 1973. In the interim, their use will be restricted to pilot or demonstration projects conducted under such programs as Title III of the Elementary and Secondary Act.

Educational Personnel Competencies

By the end of 1974, competencies expected of teaching personnel in elementary and secondary schools will be clearly identified. Evidence will be available showing relationships between teacher competencies and pupil learning. Teacher training techniques will be available for use in preservice and inservice teacher education programs which are aimed at the specified competencies. Evidence will be available to State policy makers which shows the extent to which teacher effects on pupil learning support various credentialing requirements.

This tartet is not unattainable. It requires a number of activities, some of which must be performed sequentially. First, teaching competencies must be clearly specified. Then, techniques for assessing teacher competencies and also for assessing pupil learning must be available. These techniques are then applied in research projects conducted in educational settings. Teacher training teachniques aimed at the specified competencies must also be developed.

The initial clarification of competencies began in 1971 with the development of a catalog of teaching competencies. Projects to develop personnel assessment techniques in specified areas, as well as personnel training techniques, are being conducted in 1972. Also, pupil assessment techniques in several areas are under development. It is anticipated that research projects using those techniques can begin around January, 1973. Thus, research evidence and training materials related to selected teaching competencies will be available in 1974. The number and extent of such evidence and materials will depend upon available support.

Alternative Educational Practices

By the end of 1976, techniques will be available and accessible to each school district which will make it possible for every child who is not severely handicapped to master the basic skills of communication and computation during the elementary grades of schooling at an average per pupil cost which is within the range of the normal operating budget of any school district in Florida.

The target should be easily achievable. Admittedly, it describes only one aspect of the new concept of school—the idea that each pupil shall master the basic skills essential to society. Comprehensive techniques for assessing these learnings should be available during the 1972-73 school year. A variety of alternative instructional practices will be under investigation in 1973-75. At the same time, personnel training and assessment techniques associated with those practices will be under development. By 1975-76, demonstrations of a variety of successful alternative practices should take place. The latter phases of this work will be carried out under the auspices of other programs, since the Educational Research and Development Program is not authorized beyond 1973-74.

Proposed Program for 1972-73

Chapters II through V describe the proposed Educational Research and Development Program for 1972-73. The program is divided into three program areas—alternative practices, assessment and management techniques, and educational personnel development. In addition, there is a fourth area for technical support and program management.

In the area of alternative practices, it is recommended that technical assistance and evaluation support be provided to thirty school-based projects using alternative practices. Also, it is recommended that present projects under this category be continued and expanded.

In the area of assessment, it is recommended that the assessment items for grades K-12 in mathematics, writing, and reading be completed and that major development take place in the areas of learning skills, science, and human relations. Cost analysis projects and resource utilization projects now underway should be continued. Extensive technical support should be provided for developing projects in vocational areas, under the auspices of the Vocational Division.

For educational personnel training, current projects to produce assessment procedures and training procedures for educational personnel should be expanded. The projects for providing materials and program analyses should be continued. A series of new research projects relating teacher competencies to pupil learning should be initiated.

A major effort should be mounted to coordinate research and development activities under several programs. This would not be a function of the R & D program, specifically. Thus, the portion of the budget assigned to technical and management support needs to be increased only slightly to accommodate growth in the

legislated R & D Program.

The recommended allocation for 1972-73 is shown below, in comparison with allocations for 1970-71 and 1971-72.

	1970 – 71	1971 – 72	1972 – 73
Alternative Educational Practices	$ 332,000	$ 150,000	$ 950,000
Development of Assessment Techniques	573,313	855,250	1, 200,000
Educational Personnel Training	142,769	150,000	600,000
Advisory Groups and Technical Support	151,978	194,750	220,000
TOTAL	$ 1,200,000	$1,350,000	$2,970,000

CHAPTER II

THERE IS ALWAYS A WAY

Fundamental to the new concept of school is a conviction that every pupil can learn. In fact, when pupils do not learn, it is the school that is failing. Society has commissioned the school to help all pupils learn. If the schools are not successful, society must find a new agent for this commission.

There is always a way to bring about learning. In many situations, the approach currently in use may be optimum. However, for certain students or certain learning objectives, alternatives may be needed. These needs can vary from objective to objective and from student to student. At time, the need may be for corrective instruction to compensate for missed prerequisites; in others, the learner might need to move ahead rapidly, bypassing certain instructional activities. At time, close supervision may be needed; at others, traditional school facilities may not be necessary. The new concept of school provides for unlimited variations in educational practices.

The preceeding paragraph asserts a need for alternative school programs and practices. It also suggests the need for more sophisticated school management procedures. A focus on learning, as contrasted with a focus on simple and efficient administrative procedures, makes the problems of school management considerably more acute. This is a serious consideration, particularly at a time when school management is becoming more difficult because of societal conditions. On the other hand, it seems likely that a focus on purposeful learning could reduce student tensions attributable to the dehumanization of the schooling process.

Projects to Stimulate Alternative Practices

A major function of the R & D Program is to identify, field test, evaluate, and disseminate alternative educational strategies and tactics. The results will provide schools and school districts with additional techniques for meeting their new obligations.

R & D Projects to stimulate alternative practices are of four types: (a) projects related to school management practices, (b) projects directed primarily at increasing learning, (c) projects aimed primarily at decreasing costs without decreasing learning, and (d) comprehensive projects. Three alternative practices projects were initiated in 1970-71; one is being continued. Additional projects are being initiated on a small scale in 1971-72. The projects for alternative practices are listed in Section 2.0 of Appendix F.

Two of the projects initiated in 1970-71 were fairly large in scale. One project produced a plan for operating an individualized system of elementary education (203)*. This project was conducted jointly by Florida State University and the Dade County Schools. The project surveyed available techniques and materials for individualized instruction. It also identified additional techniques and materials which need to be developed. In addition, it provided a design for administration and management to support an optimal model for individualized instruction at the elementary school level. The products of this project will be used in planning projects conducted under other program auspices.

A second project dealing with alternative practices was conducted in the area of reading (201). It consisted of a broad scale field test of the Hackett Reading System. This system consists of a set of performance objectives and criterion tests for use by teachers in managing classroom instruction. The project was conducted jointly with the Adult Education and Migrant Education Sections in the Department of Education. The reading system was used in 290 classrooms with students from preschool level through adult. There was also an independent evaluation of the effects of the system (202). The Hackett System has since been purchased by a textbook publisher. When the results of the evaluation are compiled, they will be made available to school districts in Florida considering the use of the System.

Another project initiated in 1970-71 uses students as participants in instruction (204). This project developed materials and procedures for training school leaders to organize and manage programs for student participation in instruction. It also produced materials and procedures for training teachers to use student tutors. The procedures were used in three schools during the fall of 1971. The techniques are currently being refined.

---

* Parenthesized numbers are references to project descriptions in Appendix F

Additional field tests will be conducted. Materials designed to be used by student tutors will be collected, reviewed and cataloged in a manner which will relate the materials to the catalogs of objectives produced under the assessment projects. This project is conceived as a method for increasing learning without increasing costs. The effectiveness of the program for this purpose will be evaluated during 1972-73.

The four projects being initiated in 1971-72 represent separate strategies for working toward alternative educational practices. Each of these strategies was explored to a certain extent in the comprehensive project to develop an optimized model for individualized instruction. Since the level of support for the Educational Research and Development Program is not sufficient to allow for full-scale implementation of comphrehensive projects, the components which make up such projects are being analyzed. Through this approach, a variety of alternatives which can be assembled in different patterns for different situations will be generated. Their demonstration will take place in projects supported under Title III of the Elementary and Secondary Education Act, as well as other programs.

One strategy for stimulating alternatives is to begin with educational management. A school which allows alternative objectives and alternative learning procedures would be greatly constricted if it were necessary to continue school management practices which require each pupil to spend the same amount of time in each class. One new project deals with the management of a non-time-based school (208). It will identify or develop procedures for managing schools where pupils attend for varying periods of time, depending upon their progress, and where pupil scheduling and resource scheduling is dynamic (i.e., changing from day to day depending upon the needs of individual learners). It is necessary, of course, to design such a management system for operation within normal budget constraints.

A second strategy for implementing alternatives is to substitute non-school experiences for regular school experiences. Such a project seeking both cost reduction and enrichment options has been initiated (205). This project will attempt to extend school resources through study in the home, educational television, or community study.

A third strategy, aimed primarily at cost reduction, is to increase the number of pupils which professional personnel can supervise. A project has been initiated to consider promising alternatives such as the use of technology and the use of paraprofessionals for this purpose (206).

A fourth strategy for stimulating alternative practices is to increase the decision-making roles of parents and pupils in selecting curricula and objectives for individual pupils. This should increase the likelihood of relevant learning goals and objectives. It is possible that participation by parents and pupils in decision-making roles will also increase pupil motiviation and parental support. A project has been initiated to find ways for individual pupils and parents to influence their own curricula (207). It should be noted that the project is aimed at curriculum decisions for individual students; it is not intended to promote group interaction to affect curriculum decisions for an entire class or a school.

An inventory is being compiled consisting of promising practices including those related to the above strategies. This inventory will include techniques developed in innovative programs throughout the country. Tentative evaluations will be made concerning the cost-effectiveness, feasibility, applicability, and appropriateness of the various alternative practices included in the inventory. Then, recommendations for specific projects to be conducted in 1972-73 will be made.

Recommended Activities

The Educational Research and Development Program was established to stimulated and validate alternative educational practices. To accomplish this purpose, the Board of Governors recommended an early concentration on the development of new types of assessment and analysis techniques, with a delayed concentration on alternative practices. Consequently, the target date for impact of the alternative practices efforts (1976) is two years beyond the date at which authorization for the R & D Program terminates. The Board is assuming that the development initated under the R & D Program can be consumated under other programs, with the necessary technical assistance for diffusion and installation provided by the Department of Education.

It should be recognized that the primary target for alternative practices established by the Board represents only one aspect of the new concept of school—the idea that each pupil school master the basic skills essential to society:

> *By the end of 1976, techniques will be available and accessible to each school district which will make it possible for every child who is not severely handicapped to master the basic skills of communication and computation*

during the elementary grades of schooling at an average per pupil cost which is within the range of the normal operating budget of any school district in Florida.

The recommendations for the support of alternative practices are given below. It should be pointed out, however, that these recommendations are made with the understanding the the legislated R & D Program will be closely coordinated with other sources of R & D support within the Department of Education. (This topic is discussed further in Chapter V.) The scope of educational renewal envisioned by these recommendations requires a base of support much greater than this single R & D Program. In the event that other sources of support are not brought to bear, activities under the legislated R & D Program should be restricted to those essential for achieving the target set forth above.

The following recommendations are made with the assumption that sufficient broad-based support for implementing alternative practices will be available under other programs. To provide the necessary exploratory work for implementing alternative practices under other programs, support for this R & D compontent should be expanded appreciably during 1972-73. The recommended budget is $950,000. This compares with $150,000 in 1971-72 and $332,000 in 1970-71. The R & D Program should systematically monitor promising projects for developing alternative educational practices. Numerous such projects are now underway throughout the country. These projects are being conducted by regional educational laboratories, local school districts and other agenices. A center should be established in Florida to maintain contact with promising projects and to bring materials and techniques from those projects to Florida ($100,000). The could prove to be a saving in both time and money for the Florida R & D effort.

The project to produce a management system for non-time-based schools should be expanded. This should include the development and testing of a computer-based monitoring system using remote terminals, at a cost within normal budget constraints ($100,000).

The pupil participation in instruction project should be continued and expanded to other areas of the curriculum ($50,000). Research should be conducted to show the effects of student participation on pupil learning ($50,000). Minimal technical assistance should be provided to 200 schools wishing to initiate pupil participation in instruction ($50,000).

Thirty separate projects should be conducted to provide technical assistance and evaluation support to schools in Florida wishing to install and test alternative practices. It should be noted that this support is only for technical assistance and evaluation; actual costs of implementing the alternative practices will be borne by local school districts through their own budgets or through projects supported from other fund sources ($20,000 per project, or $600,000 total).

CHAPTER III

IF YOU CAN'T TELL WHETHER THE SCHOOL IS SERVING THE PEOPLE, THE PEOPLE MAY BE SERVING THE SCHOOL

The new concept of school which is coming emphasizes service to the people--the pupils, the parents, the society. This is not meant to imply that the present school does not strive to serve the people. It does. Unfortunately, measuring its success is very difficult. Adequate assessment techniques usually are not available.

Recent demands for accountability in education are an outgrowth of a public desire to see that the schools are serving the people. A press for accountability has caused some anxiety on the part of educators, for often they, too, cannot tell the extent to which the schools are serving the people.

The Florida Department of Education is taking a constructive approach to the issue of accountability. It defines accountability as "the process of explaining the utilization of resources in terms of their contribution to the attainment of desired results". It should be noted that the concept of accountability requires that the use of resources be explained. It does not require that any pre-specified results shall be achieved. Thus, accountability merely assures the availablity of relevant information which can be used in making decisions regarding the allocation of resources. The concept of accountability does not justify after-the-fact criticism when certain results have not been achieved unless it was understood in advance by all parties that such results should be expected.

Clarifying Objectives and Selecting Assessment Devices

In attempting to determine whether the schools are serving the people, it is necessary to identify the results which must be achieved in order for the people to be served. These results are, of course, determined by the people--either individually or collectively. Those desired results which are deemed to be in the best interest of society are decided collectively. The desired results which are deemed in the best interest of individuals are, to the extent possible, decided by the students or their parents. In both cases, professional educators (either at state or local levels) assist by making the desired results explicit. In Florida, the collective determination of desired results in consummated through action by the elected officials who comprise the Legislature, the State Board of Education, and district school boards.

The possible desired results of education can be classified under different sets of descriptors:

1. There are desired results expressed in terms of knowledge and skills which can be prespecified. In many cases, the desired result of an educational program is for students to reach a certain level of proficiency in a given knowledge or skill area. For example, students may be expected to learn to read, to solve mathematical problems, to perform on a musical instrument, to demonstrate a degree of physical stamina, to employ certain techniques for analyzing social or political issues, etc.

2. There are other desired results expressed terms of experiences or activities in which individuals should participate. In some cases, the desired result of an educational program is simply for the student to participate in an activity deemed inherently worthwhile. The activity is not contingent upon the success of students in mastering any discrete set of knowledge or skills. Examples include exploratory activities in virtually all fields--aesthetic, vocational, sciences, humanities, etc.--as well as extracurricular activities.

3. Because of the manner in which public education is organized, there is another class of desired outcomes related to the health and welfare of pupils. The schools are expected to see that students are safely transported to and from school, to see that they are adequately supervised while away from home, and to see that needy members of the student population received adequate nourishment during the school day.

To determine whether schools are serving people, it is necessary to examine results of school programs. Those results may be any of the three types described above, or a combination. The program results selected for analysis in any given situation will depend upon the nature of the program and the constituency being served.

In other words, the criteria for program assessment are determined by the desired program results.

It should be noted that the term "program" can be used in at least three contexts: (a) the set of activities comprising the school experiences for one learner over a given period of time, (b) the set of activities which comprise one area of the curriculum in a given school, such as the mathematics program, or (c) the activities which constitute education for a given population, such as the "educational program for Florida." In assessing educational programs in any of the three contexts, it is necessary to identify "desired results" and to collect information which sheds light on their achievement.

A New Concept of Testing

The new concept of school calls for a new concept of testing in whatever context the assessment is applied. The new concept places primary emphasis on diagnosis for program planning (using "program" in all three contexts described above) and on assessing mastery of knowledge and skills (when a program is intended to produce mastery). In other words, diagnostic tests are given to assist teachers in selecting appropriate learning procedures for individual students. In a different context, diagnostic tests are given to help program planners at state and local levels determine optimum policies for resource allocation.

Tests of mastery are given to determine whether students have mastered the objectives toward which they have been striving. Such tests should be given if students cannot reasonably be expected to have mastered the objectives. There is little, if any, reason to give tests which are designed to label half of the examinees "failures" because they are "below average". School programs should be designed for purposeful learning. The tests should be designed to determine whether the purposes are achieved. If an expected proportion of the students does not achieve minimum schores on the tests, the most reasonable conclusion should be that the school program is ineffective and requires revision.

This new concept of testing is not intended to imply that all students should actually master the same objectives. Nor does it imply that the minimum is the standard for everyone. Conversely, it calls for different tests for different programs—for different individuals. Each test should measure those objectives which that program—or that individual—is expected to master.

The latter approach—individualizing the test—requires not simply a collection of tests, but an assessment system which can generate appropriate tests for an infinite variety of programs, situations, or individuals. In all project areas, the R & D Program is producing such a system. In each case, the system consists of a catalog of objectives and corresponding test items for the objectives in the catalog. The user of the system begins by selecting from the catalog of objectives those which are appropriate for his class or program. Then, assessment items for those objectives only are assembled for use. It should never be necessary to modify a program because of the tests. More appropriately, the test is constructed for the program.

Projects to Produce Techniques for Assessing Pupil Learning

The R & D projects for developing pupil assessment techniques are intended to make the new concept of testing possible. Eleven such projects were initiated in 1970-71. These are in the areas of art (101), communication skills (writing and speaking), (102), employability skills (103), horticulture (104), human relations skills (105), mathematics (106), music (107), typewriting communication (108), social studies (109), science (110), and reading (111). All projects were continued in 1971-72. In addition, new projects in learning skills (112) and automotive mechanics (113) were initiated in 1971-72.

In recommending subjects and levels, the Board attempted to sample from the total range of the curriculum, hoping to encounter the full spectrum of situations which might be expected in a comprehensive program to develop assessment techniques. Hence, the scope of the projects varies significantly. Some are producing only pre-objectives (see Appendix G), some are producing objectives and items for State assessment, some are dealing comprehensively with a single level of education (e.g., the concept of "man in his habitat" in social studies), some deal only with competencies required for job entry.

It should be recognized that the Board recommends the development of pupil assessment instruments only when suitable instruments and techniques cannot be obtained more economically. For this reason, the Department staff is conducting an extensive national search for objectives and assessment items which meet the necessary specifications. Also, contractors are admonished to carefully survey all available sources and to produce new items only when satisfactory specimens are not available.

Uses of the Assessment System

All R & D pupil assessment projects are producing objectives and assessment items for three primary uses which represent the assessment contexts discussed earlier. They are (a) classroom use by teachers, (b) independent program assessment by the Department of Education or by district staffs, and (c) State assessment. Some of the projects are focusing more directly on one or two of the uses.

For *Classroom use,* catalogs of objectives and items are made available to teachers. The teachers select those which are appropriate for their students. They place them in an appropriate sequence. They then assemble items in a series of diagnostic tests. These tests are administered at appropriate times in the learning sequence. Alternate items are selected for use in progress tests. These items are likewise administered at approriate times in the learning sequence.

The three vocational education projects, which began in 1970-71 (employability skills, horticulture, and typewriting communications are planning orientation activities for classroom teachers during the spring or summer of 1972. This will allow the classroom use of those objectives and items during the 1972-73 school year. In most of the other project areas initiated in 1970-71 (*viz.*, art, communication skills, human relations skills, mathematics, science, and reading, school districts will be encouraged to develop and submit projects under ESEA Title III and VI-B (Exceptional Child Education) to support the pilot use of objectives and items in classroom settings. In most areas, there appear to be technical problems associated with the assembling of items. These problems must be resolved through field trials.

The second use of the assessment system is for *independent program assessment.* Such assessment is normally conducted by an external group to determine the extent to which a program is achieving its established objectives. In using the system for this purpose, the first step is to identify the specific objectives on which a given program should be evaluated. This is done by asking the persons responsible for the program to select the appropriate objectives from the catalog of objectives. Then, assessment items for those objectives are assembled and administered to participants in the program. Often, an analysis of program costs is conducted in conjunction with the program assessment.

During the spring of 1972, objectives and items from five different projects will be used in conjunction with cost analysis procedures to assess programs in thirty-three different participating schools. The purpose of this assessment will be to test the assessment system. At present, the system is not considered ready for use in drawing definitive conclusions regarding the differential effectiveness of instructional programs. The first uses for the latter purpose will take place in 1972-73 in evaluating alternative educational practices. The projects which will participate in the field trails of the system during the current year are art (grades 9-12), communication skills (speaking and writing, grades 9-12), science (middle school), reading (grades 1-6), and mathematics (K-2).

The third use of the assessment system is for *state-wide assessment of minimum learning objectives.* This assessment is administered by the Department of Education. When the catalogs of objectives are used for this purpose, a representative group of persons is asked to identify those objectives which are considered to represent minimum expectations of society. The objectives may be selected at different grade levels for different groups of students. Once minimum objectives are selected, assessment items for those objectives only are assembled. These items are administered to a sample of pupils at the specified grade or age level. The tests are scored by the State and results are published showing the extent to which pupils in each school district achieve minimum learnings.

The project in reading produced items for use in State assessment in 1971-72. A revised set of objectives and items for reading assessment in 1972-73 is also being produced. In addition, State assessment items will be produced by the communication skills project (for writing) and the mathematics project.

Assessing Resources and Costs

Obviously, it is not possible to operate under an expanded concept of school without information on costs and resources. Pupil assessment information alone is not sufficient. When considering alternative practices, it is certainly necessary to have information on costs and resource requirements.

The cost analysis issue carries with it a special problem. While it is technically possible to provide cost analysis information on any type of unit breakdown which might be conceived, there is certainly a point of diminishing returns in applying detailed cost analysis techniques. In other words, the cost of highly detailed cost analysis may not always warrant the benefits which can be derived therefrom. For this reason, the R & D project for developing cost analysis techniques (171) is producing two systems. One is a uniform accounting system to be implemented state-wide. This system, which will replace the present accounting system, provides

information in considerably more detail than has previously been available. It is also expandable, allowing local school districts to collect additional information which is needed for their special purposes.

In addition to the basic accounting system, the project is developing supplementary cost analysis procedures which can be applied uniformly to collect detailed cost information in any specified situation. This system may be applied when either the accounting system, a professional hunch, or combination of the two, indicates that the pattern or level of costs in a given situation varies from what should reasonably be expected. This system will be used in all projects to evaluate alternative practices. It is being field tested in the thirty-three participating schools during the spring of 1972.

With pupil assessment information and cost information available, the question of how to increase learning is still present. This question relate to the use of the resources—staff, materials, facilities, pupils, methods, and time.

The effective use of resources is a key element in any organized educational program. The manner in which a clsssroom teacher uses available resources constitutes the art of teaching. Likewise, the productive use of resources which are potentially available constitutes the essence of educational management as practiced by principals, superintendents and state education officials. In either case an analysis of the use of educational resources is an analysis of the ducational processes which are taking place.

The R & D project for developing a system for assessing resource utilization (151) is particularly significant. This system is designed for use in conjunction with cost analysis information and information on pupil learning. It will be used by local school personnel in determining how to make effective use of the resources which they have available. It is intended to help identify the optimum set of alternatives for any given learning situation. It is unlikely that the system will produce any uniform pattern for optimum use of staff, materials, or facilities, which can be applied statewide. Variations in learning objectives, staff capabilities, pupil attitudes, and the complement of resources available would make this unlikely. Instead, the aim of this system is to make it possible for personnel in school districts and individual schools to analyze their use of resources and devise patterns which will lead to perceptible increases in learning. This system is being field tested in several schools during 1971-72.

Recommended Activities

The targets for the R & D Program established by the Board of Governors identified the development of assessment and management techniques as the first milestone:

> *By the end of 1972, techniques for improving educational management will be available and readily accessible to all school districts in Florida. These will include techniques for (a) obtaining criterion-referenced measures of pupil achievement in grades K-6 in basic skill areas taught in those grades, (b) obtaining detailed analyses of educational costs, and (c) obtaining analyses of the effectiveness of resources, with recommendations for improvement.*

Because of this target, the major share of the R & D allocation for 1970-72 has been assigned to the development of assessment and management techniques. As indicated in Chapter I, the "raw materials" for achieving this target will be available by the end of 1972. These "raw materials" will include the necessary criterion-referenced measures in grades K-6 for reading, written communications, and mathematics, as well as the cost analysis system and a system for analyzing the effectiveness of resource utilization.

The target established by the Board of Governors falls far short of the target suggested by the Florida legislature in "The Educational Accountability Act of 1971." This act call for "uniform state-wide educational objectives for each grade level and subject area." The Board is recommending a continued major emphasis on the development of assessment techniques in order to reinforce the intent of the Educational Accountability Act.

Specifically, the Board recommends that the R & D investment in assessment and analysis techniques be increased thirty percent to about $1,200,000 during 1972-73. This compares with $855,250 in 1971-72, and $573,313 in 1970-71. The projects in reading, science, and mathematics should be virtually completed with objectives and assessment items available for classroom use, for independent program assessment, and for State assessment if needed ($300,000). Major developmental work should take place in the areas of learning skills, social studies, and human relations ($300,000). Technical support should be provided to the Division of Vocational Education for producing catalogs of objectives in approximately 20 course areas ($175,000), with additional costs supported through vocational units in the local school districts. The projects in music and art should be continued and exploratory projects in physical education, literature, foreign languages, and

humanities should be initiated ($275,000).

The cost analysis project should concetrate on the development of data processing capabilities and other technical capabilities for local school districts; the resource utilization project should be limited to minimal technical assistance in the use of the system ($150,000 for both projects).

CHAPTER IV

HELPING THE HELPERS

The new school—that is, the new concept of school—focuses on learning, not teaching. The educator's job is to help that learning occur. The teacher helps students learn. The principal helps teachers help the students learn. The superintendent helps both teachers and principals.

In short, the people who work in the schools are helpers—a very special kind of helper. They manage the learning environment so that learning is most likely to take place. In so doing, they program their own actions to make student actions become purposeful. When dealing with learners, they sometimes hold back and wait for discovery; sometimes they suggest; sometimes they recommend; sometimes they demand. Often they concentrate on the learning environment, rather than on the actions which constitute traditional "teaching" or "administering."

The people who work in the new school must be artists. As artists, they must clearly see their mission. They must see the learning experience aesthetically, in the context of the experience of living.

The people who help students learn must also have the skills necessary to execute their mission. Like artists in any field, they must have a broad repertoire of highly developed skills. They must draw upon those skills at appropriate times. Obviously, it is only through the artistic use of his skills that a technician becomes an artist. At the same time, a sensitive person becomes an artist only when he is able to apply the technical skills of his art. If he cannot apply those skills, he may be a critic or connoisseur—but he is not an artist.

Development of Training Techniques for Educational Personnel

Educational personnel training is the primary mechanism for helping teachers and other personnel develop the capabilities for facilitating learning. The Educational Research and Development Program is producing new training procedures and materials for training educational personnel.

The new concept of school applies not only to elementary and secondary education. It applies equally well to teacher education. There are a variety of ways in which persons can develop the necessary skills for teaching or for educational administration. The critical question is, "Does a teaching candidate have the requisite competencies?"; Not,"Did he complete the required number of credits in a specified program?" The Board of Governors has strongly recommended reducing State requirements for teacher certification to those which relate directly to pupil learning. The Board made the following recommendation on January 30, 1971:

> *"The Department of Education should seriously consider a policy which would provide that by 1974 teacher certification requirements would be based only on research evidence showing the relationship between those requirements and pupil achievement. The Department should institute research projects which will generate information showing the relationship between specified teacher characteristics or behaviors and pupil achievement."*

Implementation of this recommendation requires that teacher competencies be identified, that procedures for assessing those competencies be available, that procedures for assessing pupil learning be available, and that systematic research be conducted. In addition, it is desirable that systematic procedures for training teachers in the competencies of interest also be available.

The needed pupil assessment techniques are being developed in R & D projects described in the preceding Chapter. The clarification of teaching competencies, the development of assessment teachniques for educational personnel, and the development of training procedures are taking place under R & D projects discussed below. Research on the relationship between teacher competencies and pupil learning has not begun, but is projected for 1972-73.

The cornerstone of development efforts in educational personnel training is a project to produce a catalog of teacher competencies (401). This project is organizing statements of teacher competencies so that they can be used in program planning and analysis. The catalog, which is similar to the catalogs of pre-objectives being

produced in the various pupil assessment projects, is intended to accomodate any competencies which educators feel are important. It should also be noted that the catalog is nonprescriptive. It is not a collection of competencies which must be mastered for any given teaching position. In fact, it would be completely unrealistic to expect any person in education to master all of the competencies in the catalog.

During the fall of 1971, the R & D Program—in cooperation with the Bureau of Teacher Education, Certification and Accreditation—endeavored to orient all interested teacher education personnel in the State to the developmental efforts now being carried out in the area of educational personnel training. A slide/tape presentation (421) was produced and exhibited in more than 15 orientation sessions held throughout the State. This was followied by training sessions dealing with the catalog of teaching competencies and also with the project for reviewing available teacher training materials (423). The latter project is being conducted to collect training materials directed at specific personnel competencies, as identified in the catalog of competencies. Research and development projects and training projects throughout the nation are being contacted to obtain materials. These materials are reviewed by appropriate teacher educators in the schools or higher institutions. Those materials which warrant wide use are reproduced and sold at cost by a distribution center (422), provided that the materials are in the public domain and are not otherwise available.

During 1971-72, major attention is directed toward the development of assessment techniques and training teachniques for specified educational personnel competencies. These competencies are selected from the catalog of competencies which was produced in 1971. As with pupil assessment, there are a variety of ways to select competencies for a given project. Competencies could be selected for a given level of education such as middle school (426), for a given role in education such as community school director (425), or for a given area of teacher performance applicable at all levels of education such as human relations skills (427). As the projects cited indicate, all three approaches are being sampled.

The training program for community school directors was developed in 1971 to facilitate the implementation of the Community School Act, which was passed by the 1970 Legislature. Training programs for community school directors were implemented at three universities in Florida during the summer of 1971. However, participation was below program capacity because funds appropriated to implement the Act were sufficient to support programs in only six school districts.

The project for developing assessment and training techniques for middle school teachers is particularly significant because it is the foundation for a new approach in teacher certification. Specific certification requirements for middle school teachers are not yet in effect. Beginning in 1974, middle school certification will be initiated, but not on the traditional course-credit basis. Instead, competencies will be assessed in school settings and those teachers with the required competencies will be granted certification, irrespective of the manner in which the competencies were learned. Thus, training programs leading toward certification for middle school teachers may be operated by local school districts, higher institutions, or other agencies. The middle school project under R & D is based on guidelines for middle school teacher training originally recommended by the Florida Teacher Education Advisory Council. It is building on a one-year study, already completed, to make those guidelines operational.

The remaning projects for educational personnel training deal with competencies which appear to be particularly relevant to the new concept of school. One project will produce teacher training and assessment procedures for transforming classroom instruction to a performance objective basis (424). This project supports the R & D projects for developing pupil assessment techniques described in the preceding Chapter, specifically the classroom use of the products. It is designed to help teachers use the catalogs of objectives and assessment items for clarifying their purposes, diagnosing learning needs, selecting appropriate materials and instructional procedures, and communicating with pupils and parents regarding student progress. The project was begun with a focus primarily on reading. It is being expanded to encompass other areas.

The project to develop assessment materials and training materials for human relations skills in teachers (427) is aimed at helping teachers deal with non-cognitive aspects of the school environment. The project for producing educational management techniques for school administrative personnel (428) will identify competencies needed by administrators in the "new" school. This project is most directly related to the cost analysis and resource utilization projects described in Chapter III and the project to develop a management system for non-time-based schools described in Chapter II.

Recommended Activities for 1972-73

The major concern of the R & D teacher education component is in specifying educational personnel competencies and validating those competencies. During the first two years of development, emphasis has been on specifying competencies and producing the necessary assessment techniques. These elements are essential for validation. During 1972-73, the validation will begin. This sequence of activities is aimed at achieving the following target which was first proposed by the Board of Governors in the R & D Second Annual Report:

By the end of 1974, competencies expected of teaching personnel in elementary and secondary schools will be clearly identified. Evidence will be available showing relationships between teacher competencies and pupil learning. Teacher training techniques will be available for use in preservice and inservice teacher education programs which are aimed at the specified competencies. Evidence will be available to State policy makers which show the extent to which teacher effects on pupil learning support various credentialing requirements.

It is recommended that teacher education activities under R & D be expanded significantly during 1972-73. The level of support for this portion of the program should be $600,00. This compares with $142,769 in 1970-71, and $150,000 in 1971-72.

The research to explore relationships between pupil learning and teacher competencies should be implemented ($200,000). The projects to develop assessment techniques and training techniques for middle school competencies, human relations competencies, administrative competencies, and competencies for using performance objectives should be continued and expanded ($240,000). The center for collecting and distributing teacher education materials should be continued and technical assistance should be provided to school districts and institutions for analyzing their programs using the catalog of teaching competencies ($165,000).

CHAPTER V

ORCHESTRATING EDUCATIONAL RESEARCH AND DEVELOPMENT

It is apparent to most persons that developmental work such as that described in the preceeding Chapters is required to bring about a new concept of school. Alternative practices are needed, new assessment techniques are needed, and new personnel training methods are needed. However, a collection of projects in each of these areas is not sufficient. The projects must be connected, correlated, coordinated, interfaced, and orchestrated.

Without orchestration, it is likely that the many projects will produce little change. Recent history of educational research and development in the United States constitutes a warning to persons who might underestimate the importance of orchestration in a research and development program. From 1957 to 1969 Congress appropriated $516,129,000 to the U.S. Office of Education for the support of educational research and development. Additional allocations for educational research and development were made to the National Institute of Child Health and Human Development. Several other federal agencies also supported educational research and development as secondary efforts to further the primary missions of those agencies. In spite of this support, Stephen K. Bailey, Chairman of the National Advisory Committee on Educational Laboratories, assessed the federal effort as having had "little if any perceptible effect on educational behavior".

During much of the period in question, research support from the Office of Education was non-directed and non-programmatic. That is, researchers were invited to submit proposals for projects to solve problems which they deemed significant. It was only during the final years of the period that federal support for research took on characteristics of a programmatic effort. Since that time, the federal government has continued to move toward programmatic or directed research in education. This movement has culminated in a recommendation for a National Institute of Education.

Orchestrating R & D in Florida

Florida's State programs for R & D are moving toward programmatic or directed research and development. The Board of Governors recognizes the need for coordination between programs and is on record as strongly recommending such coordination. On December 11, 1971 the Board recommended that, by the end of 1972, all R & D conducted under the auspices of the Department of Education, including that conducted in the State University System, should be coordinated for the purpose of achieveing state R & D goals.

While the Board feels strongly about the coordination of R & D programs, effecting such coordination is outside its authority. The statute creating the Board of Governors (see Appendix D) has been interpreted as restricting the Board's jurisdiction to those R & D projects supported under that same statutory suthorization (Section 229,526, Florida Statutes). Projects supported under the Vocational Research Program or Title III of the Elementary and Secondary Education Act are outside the domain of the Board of Governors.

The general responsibility for coordinating state educational Research and Development activities is assigned to the Associate Commissioner for Planning and Coordination. This Office works with policy groups in the Department of Education, administrators of the various programs, and outside advisors, including the Board of Governors for Educational Research and Development. The Office has initiated efforts for coordinating the various R & D programs, beginning with the drafting of a master plan for educational research and development. In its present form, this is a descriptive document showing what R & D activities are now underway (see listing in Appendix I). It is anticipated that subsequent revisions of the master plan for R & D will be increasingly prescriptive.

For technical advice on R & D needs, the office of the Associate Commissioner relies heavily on knowledgeable specialists within the Department of Education; their backgrounds yield valuable insights regarding which R & D projects are most likely to "pay off" for their special areas or disciplines. Because of their critical role in influencing R & D decisions, these specialist must maintain close contact with all R & D projects (sponsored under any program) which relate to their area of expertise. In their role, they must guide R & D programs to avoid both overlaps and gaps in planning. The specialists should see that no two R & D projects are unknowingly directed toward the same products. Also, the specialists should see that no R & D products are developed which cannot be used without related products or techniques which are unavailable.

This responsibiity represents a change in the traditional role of Department specialist, particularly curriculum consultants. In the past, these consultants have been given heavy loads of field work. The opportunities for orchestrating R & D in their special areas were either non-existent or extremely limited.

R & D programs administered by the Department of Education include two major programs supported from federal funds: Title III of the Elementary and Secondary Education Act and the Vocational Research Program supported under the Vocational Admendments of 1968. Both of these programs are supporting projects aimed at State needs. A close working relationship has developed between those programs and the legislated Educational Research and Development Program. Efforts are now underway to see that activities under the three programs are coordinated.

Another major source of support for educational research and development under the Department of Education is in the funding for the State University System. The funding formula for the universities provides research positions which are "earned" on the basis of undergraduate and graduate student enrollment. This is conceived as a non-directed research program, in which university professors are allowed to pursue research akin to their interests. The coordination between this program and the legislated Education Research and Development Program is primarily a matter of seeing that State funds are not appropriated twice for the same activity. Contracts with State universities for projects under the Educational Research and Development Program allow only for reimbursement of direct costs. This reimbursement does not cover indirect administrative costs or the cost of faculty members assigned on State research positions. (The policy regarding reimbursement which was adopted by the State Board of Educaion is Appendix H.)

R & D in Reading: Emerging Orchestration

In the area of reading, there is an emerging orchestration between the various R & D programs in the Department. This is necessary, and expected, since the Commissioner has declared the improvement of reading to be a major priority for the Department of Education. For this reason, a number of programs are supporting developmental activities in reading. It is anticipated that these will be supplemented by activities supported under the federal Right-to Read Program. At the request of the U. S. Office of Education, five sites for school based right-to-read centers in Florida have been nominated by the Department of Education.

ESEA Title III is also supporting projects which should contribute to the improvement of reading instruction. For example, there is an "individually prescribed instructional support program" in Dade County and a project for the improvement of primary education in Leon County. In addition, five of the fifty-two prospectuses of new Title III projects submitted in the Fall of 1971 related to reading.

The Migrant Education Program supported developmental work in reading during 1970-71. The complete reading program for migrants included the acquisition of supplementary reading materials for use with migrant children, staff development for teachers in the use of those materials, development of a suggested set of performance objectives for reading instruction, and acquisition of test items to measure student progress. In addition, the Migrant Education Program cooperated with the R & D Program and the Adult Education Program in supporting a broad-scale field test of a system for improving reading instruction in the classroom (201 and 202).

The R & D Program is also developing teacher training materials to improve reading instruction (424) and techniques for assessing pupil progress in reading (111). During 1971-72, the latter project is building upon work conducted in the Migrant Program, as well as work carried out in the first year of the R & D project.

Initially, the above projects were pursued relatively independently, with each of the respective administrative entities striving to make its project successful. During 1970-71, the projects came under the scrutiny of the Right-to-Read Task Force which offered general recommendations. Recently, the reading consultant in the Department has been asked to consider the monitoring and technical review of these projects as a major responsibility.

Orchestration of Projects Conducted under the Legislated R & D Program

Since the legislated R & D Program is a program of directed research, the coordination and orchestration of the various projects is a matter of prime concern to the Board of Governors. From the inception of the Program, the Board has recommended the establishment of a strong staff for coordination and technical support. This has been accomplished through the employment of a skeleton staff of career service positions supplemented by temporary personnel serving under contract. Also, staff members throughout the Department are serving as part-time coordinators of specific R & D projects.

The administrative staff for the Education Research and Development Program, which is housed in the Division of Elementary and Secondary Education, performs technical management functions and carries out the day-to-day coordination between projects. This office is staffed with two professional personnel—an administrator and a research associate—and two secretaries. These personnel are supported out of the general

operating budget for the Division of Elementary and Secondary Education, rather than from the special R & D allocation. Both the Division of Elementary and Secondary Education, performs technical management functions and carriers out the day-to-day coordination between projects. This office is staffed with two professional personnel—an administrator and a research associate—and two secretaries. These personnel are suppored out of the general operating budget for the Division of Elementary and Secondary Education, rather than from the special R & D allocation. Both the Division of Vocational Education and Secondary Education and the Division of Vocational Education have assigned several additional persons to coordinate individual R & D projects. These persons are listed as DOE coordinators in Appendix F. Expenses incurred by the persons in conjunction with R & D projects are charged to their respective Division budgets, rather than to the special R & D allocation.

In order to provide sufficient technical support, to assist the advisory groups, and to carry on exploratory activities outside of the contracted projects, it is necessary to allocate a portion of the R & D budget for these purposes. Current activities under this allocation are described below.

Both the Board of Governors and the Advisory Council, which are required under the law, receive expenses incurred in carrying out their responsibilities. Members of the Board of Governors also receive an honorarium. Funds are budgeted during 1971-72 for five meetings of the Board of Governors and five meetings for the Advisory Council (310 and 320).

The major expenditure in the management area is for technical support personnel. The Board considers the technical supervision of projects to be extremely important. This supervision requires expertise which the Department coordinators, who are primarily content specialists, would not be expected to possess. For this reason, the Board recommended contracting with university personnel to provide technical supervision for projects. Presently, three technical coordinators (2.25 full-time equvalent) are assigned to assist with assessment projects (333-336). Also, one technical coordinator is assigned to assist with teacher education projects (337).

Technical and management support funds are also used to prepare and issue specifications, to bring together ad hoc committees for reviewing products, to disseminate materials and information, and to provide part-time help for clerical and other research related tasks. During 1970-71, a management study of the R & D Program was conducted (338), which resulted in recommendations for stronger management support and technical support commitments.

During 1971-72, an additional project related to management is being conducted. This is a feasibility study for an R & D Center at the University of West Florida (340). This study was requested by the Florida Legislature.

Recommended Activities for 1972-73

The major recommendations presented in this Chapter are for coordination between the various programs administered by the Department of Education. This includes coordination at the policy level which is the responsibility of the Associate Commissioner for Planning and Coordination. It also includes coordination of technical aspects of projects which is an emerging concern of curriculum consultants. These recommendations do not require a special allocation of R & D funds. They do, however, require the establishment of priorities within the Department of Education which will assure that the necessary coordination takes place. As indicated earlier, coordination between programs is not within the jurisdiction of the R & D Board of Governors.

Coordination between projects conducted within the legislated R & D Program is within the Board's responsibility. The following recommendations relate to allocations of R & D funds for that purpose. ion of one contracted professional to coordinate activities related to alternative practices. Presently, t Management support activities should be increased with the addition of one contracted professional to coordinate activities related to alternative practices. Presently, there are coordinators assigned to teacher education and to

Management support activities should be increased with the addition of one contracted professional to coordinate activities related to alternative practices. Presently, there are coordinators assigned to teacher education and to assessment projects. Program expansion in the area of alternative practices will require much greater coordination. The management responsibilities of the present staff will not allow time for this additional responsibility.

Also, because of the increase in numbers of projects, additional support will be needed in all areas. It is recommended that this support be provided by interns who have completed course requirements for advanced degrees in administration or educational research and development. These interns would work under the supervision of technical personnel now assisting with R & D projects.

It is recommended that support for advisory groups and general management be maintained at its present level. The additional technical and management support described above would require a budget increase of approximately $60,000. This wll bring the total for advisory groups and technical support to $220,000, as compared with $194,750 in 1971-72 (including $37,750 for feasibility study requested by the legislature) and $151,918 in 1970-71.

APPENDIX A

FLOYD T. CHRISTIAN
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32304

December 30, 1971

Dr. Leon M. Lessinger, Chairman
Board of Governors
Florida Educational Research
and Development Program
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Dr. Lessinger:

The Board of Governors is to be commended for the Third Annual Report on the Florida Educational Research and Development Program. The spirit of the Program--"There's a New School Coming"--is one which I heartily support.

I would like to comment specifically on some of your major recommendations.

1. You recommend improved coordination between the various programs which support educational research and development. I endorse this recommendation. I am directing the Associate Commissioner for Planning and Coordination to assume a more active and aggressive role in coordinating R & D activities to assure that the State priorities are met. This may require reassignments of personnel for that purpose.

2. You recommend increased emphasis on alternative practices. Certainly, the new concept of school which you present requires viable alternatives. The effort to coordinate R & D programs throughout the Department will place special attention on alternative practices. Also, the R & D staff is giving special attention to this area. At the next meeting of the Board, we will present to you our plan for systematically testing a wide range of alternative practices.

3. You recommend significant emphasis on the improvement of educational personnel training. This is one of the major priorities which I established in 1969. We have made significant progress in this area and have received national recognition on our efforts to implement performance-based teacher education. I feel that it is now time to give this movement an additional impetus. For this reason, I

> am reactivating the Department-wide Task Force on Teacher Education and charging that Task Force to give special attention to the recommendations from the Board of Governors and to the projects now being conducted under R & D. The R & D teacher education developments must be transfused into the mainstream of State activities in teacher education.

There is one area which I am hoping will receive greater emphasis under the R & D Program. That is, the improvement of reading, another of the major priorities which I established in 1969. You have called attention to an "emerging orchestration" of R & D in reading. I will watch this orchestration closely and examine the results which accrue. I hope you will also watch these efforts and be prepared to make some firm recommendations which will assure that significant R & D for reading improvement takes place.

The services which you and your associates on the Board are providing the State of Florida are greatly appreciated. Your frank and candid, yet benevolent, recommendations are a vital key to the success of our R & D efforts.

Sincerely,

Floyd T. Christian

Floyd T. Christian

FTC:gdc

APPENDIX B

GEORGIA STATE UNIVERSITY
33 GILMER STREET, S. E. • ATLANTA, GEORGIA 30303

December 20, 1971

Honorable Floyd T. Christian
Commissioner of Education
State of Florida
Tallahassee, Florida 32304

Dear Commissioner Christian:

I am pleased to submit to you the Third Annual Report of the Florida Educational Research and Development Program. This report was prepared pursuant to the requirements of Section 229.561(2)(b)12, Florida Statutes.

This document, more than any other, represents the flavor of the R & D Program. It expresses the strong desire of the Board to advance a "new concept of school"--a school that will inspire public confidence by making every child a successful learner.

In submitting this report, the Board wishes to underscore the importance of alternative educational practices. From the beginning, the R & D Program has been expected to test alternative practices for increasing learning and reducing costs. To this end, it has been necessary first to commit a major portion of the funds to the development of assessment techniques. We feel this development is critical. Nevertheless, the Board is unwilling to retract its commitment to educational renewal through the implementation of alternative educational practices.

Division Director Boone has responded to our concern by agreeing to redirect ESEA Title III and other programs under his administration to complement the R & D Program. This would give the Division of Elementary and Secondary Education a coordinated thrust toward educational renewal, with support from a variety of fund sources.

We strongly recommend that you establish a similar approach to coordinated R & D throughout all four Divisions of the Department. This would not require a change in the locus of administration; it would require clear mission statements for each program and effective communication between the programs.

The Board wishes to express appreciation for the support which you and the Department have given the Educational Research and Development Program since its inception. This harmonious yet independent effort shall surely enhance education in Florida.

Sincerely,

Leon M Lessinger

Leon M. Lessinger
Chairman, Board of Governors for
Educational Research and Development

LML:dh

APPENDIX C

THE FLORIDA EDUCATIONAL RESEARCH AND DEVELOPMENT PROGRAM
BOARD OF GOVERNORS – 1971-72

Dr. R. L. Bright, Professor and Assistant to the President, Baylor University, Waco, Texas (1974)*

Dr. John K. Coster, Director, Center for Occupational Education, North Carolina State University, Raleigh, North Carolina (1972)*

Dr. Robert M. Gagne, Professor of Educational Research, Florida State University, Tallahassee, Florida (1973)*

Miss Barbara Goleman, Classroom Teacher and In-Service Coordinator, North Miami Beach Senior High School, North Miami Beach, Florida (1973)*

Dr. Leon M. Lessigner, Callaway Professor of Education and Professor of Urban Life, Georgia State University, Atlanta, Georgia, (Chairman, Board of Governors) (1974)*

Dr. T. E. Smotherman, Volusia County Board of Public Instruction, Professor of Educational Psychology, Stetson University, DeLand, Florida (1973)*

Dr. J. Lloyd Trump, Associate Secretary for Research and Development, National Association of Secondary School Principals, Washington, D. C. (1974)*

Dr. Herbert W. Wey, President, Appalachian State University, Boone, North Carolina (1972)*

* The current three year term of each member extends through expires on June 30 of the year in parenthesis.

THE FLORIDA EDUCATIONAL RESEARCH AND DEVELOPMENT PROGRAM

ADVISORY COUNCIL – 1971-72*

Classroom Teachers:	Miss Charlotte Spungin – South Broward High School, Hollywood, Florida Miss Lou Graves – Pinellas Central Elementary School, Pinellas Park, Florida
Principal:	Mr. Glynn R. Archer, Jr. – Key West High School, Key West, Florida
Suprintendent and Supervisors:	Mr. Radford M. Locklin – Santa Rosa County Schools Dr. William A. Byrd – Dade County Schools
School Board:	Dr. Donald Magruder – Florida School Board Association, Tallahassee, Florida
County Consortia:	Mr. Shouppe Howell – Panhandle Area Educational Cooperative, Chipley, Florida Dr. J. B. White – Florida Educational Research and Development Council (Representing ESEA Title III Advisory Council), Gainesville, Florida
Vocational-Technical-Adult Education:	Mr. Cliff A. Bellum – Sarasota County Schools
Professional Association:	Dr. Walford Johnson – Florida Education Association, Tallahassee, Florida
Higher Education:	Dr. Evelyn Martin – Florida A & M University
Non-Public Education:	Reverend Jerome Diffley – Diocese of St. Petersburg
Laymen:	Mrs. Frances Deen – Housewife, Tampa, Florida Dr. Simon W. Boyd, Sr. – Doctor of Dental Surgery, Pensacola, Florida
Students:	Mr. John Dicks – Plant City, Florida Mr. Howard Rosenblatt, President, Student FEA, Gainesville, Florida

*Advisory Council members are appointed for a term of one year.

APPENDIX D

LEGAL AUTHORIZATION FOR THE FLORIDA EDUCATIONAL RESEARCH AND DEVELOPMENT PROGRAM (Section 229.561, Florida Statutes)

229.561 Educational research and development.—There is hereby created an educational research and development program which shall be administered by the commissioner of education. It is the intent of the legislature that a specific sum of funds shall be allocated each year for the sole purpose of sponsoring the designing, development, testing, and evaluation, on a pilot project basis, of applied or action research studies or projects which seek information on questions of critical concern to present and future educational needs of this state. The commissioner of education shall develop and implement an educational research and development program as hereinafter provided. The commissioner of education shall develop and transmit, at least thirty days prior to the 1970 regular session of the legislature, to members of the state board of education, the president of the senate, the speaker of the house of representatives, and members of the senate and house committees on education a detailed plan for implementing a program of applied educational research and development. The plan shall be for four years of operation beginning July 1, 1970. The plan shall be in detail for the 1970-1971 fiscal year and the funds to support projects for 1970-1971 shall be included in the legislative budget of the state board submitted to the governor as chief budget officer of the state for the 1970-1971 fiscal year. The plans submitted in 1970-1971 for the second through the fourth year may be stated as a general long-term plan and will not require detailed cost estimates.

*(1) ADVISORY COUNCIL.—The board of education shall, within thirty days following the effective date of this act, appoint an educational research and development advisory council from a list of two or more names nominated for each position by the commissioner of education.

(a) *Membership.*—The number of individuals appointed to membership on the advisory council shall be determined by the state board of education; provided, however, that at no time shall the total membership of the advisory council consist of less than twelve persons. Each member shall be appointed for a period of one year. Members shall be eligible for reappointment. The membership and the total number of members may change from time to time as deemed appropriate by the board of education. In making appointments, the state board and commissioner shall insure that the membership shall include representation from various segments of education and shall include lay citizens and students.

(b) *Duties and responsibilities.*—As soon as practicable, following appointment of the initial members of the advisory council, the commissioner of education shall call an organizational meeting of the council. From among its members, the council shall elect a chairman, who shall preside over meetings of the council and perform any other duties directed by the council or required by its duly adopted policies or operating procedures. The council shall also perform the following duties and responsibilities:

1. Within ninety days following the effective date of this act or on September 30, 1969, whichever is the earlier date, the advisory council shall recommend individuals for nomination to membership on a board of governors for educational research and development. The advisory council shall recommend to the commissioner of education the names of at least fifteen individuals who shall include both lay citizens and professional educators of national prominence in education. The commissioner shall nominate two or more individuals for each position on a board of governors for educational research and development.

2. Make recommendations, as it deems appropriate, to the board of governors concerning the establishment and operation of a program of sponsored educational research and development as provided by this act.

3. Be knowledgeable about all projects sponsored under the provisions of this act and make such recommendations to the board of governors as in the opinion of the members of the advisory council will be of assistance in improving the program.

4. Review the evaluative data on each proj-

ect sponsored under the provisions of this act and make recommendations to the board of governors about the potential benefits the project information has for education in Florida and strategies for implementing it, including, where appropriate, priorities, target areas, phasing, or sequence.

(c) *Payment of expenses.*—Members of the advisory council shall be entitled to receive per diem and expenses for travel while carrying out official business of the council. Such expenses shall be paid in accordance with state law relating to official state travel. The department of education shall approve payment of such expenses in accordance with established rules and regulations.

(2) BOARD OF GOVERNORS FOR EDUCATIONAL RESEARCH AND DEVELOPMENT.—The state board of education shall, from the individuals nominated by the commissioner, appoint a board of governors for educational research and development.

(a) *Membership.*—The board of governors shall not exceed nine members and shall include citizens and professional representatives from several different levels of education and, to the extent possible, shall include individuals of national prominence in education from both within and without the state. The terms of appointment for each member shall be three years and until a successor is appointed, except in case of an appointment to fill a vacancy, in which case the appointment shall be for the unexpired term; provided, however, the terms of the initial members shall expire as follows: Three on July 1, 1970, three on July 1, 1971, and three on July 1, 1972.

(b) *Duties and responsibilities.*—As soon as practicable following appointment of the board of governors, the commissioner of education shall call an organizational meeting of the board. From among its members, the board shall elect a chairman, who shall preside over meetings of the board and perform any other duties directed by the board or required by its duly adopted policies or operating procedures. The board shall also perform the following duties and responsibilities:

1. Make recommendations to the commissioner for establishing a program for educational research and development as provided by this act.

2. Submit to the commissioner of education, in priority groupings, specific educational and education-related questions which, in the opinion of the board of governors, are most critical to improving the effectiveness of public education in Florida.

3. Establish criteria to be used in selecting a network of schools throughout the state to participate in conducting projects sponsored under the provisions of this act.

4. Assist with defining specifications for projects to be sponsored by the educational research and development program. All projects sponsored under the provisions of this act shall be designed to state clearly the specific objectives of the project, appropriate controls to insure reliability of data obtained from the project, appropriate evaluation of the project, especially as to the attainment of stated objectives, and adequate dissemination of the results of projects.

5. Recommend to the commissioner of education projects which, in the opinion of the board, should be approved for sponsorship by the educational research and development program.

6. On the basis of the priority of projects to be undertaken and the criteria for selecting participating schools or centers, solicit, on a statewide basis, application from local schools and centers to be designated as a participating school or center.

7. Review applications from local schools or centers and recommend to the commissioner of education the schools or centers deemed to be, in the opinion of the board, those which best support and serve the purposes of the educational research and development program.

8. Review project specifications prior to approval for funding.

9. Recommend to the commissioner of education a highly qualified person to be appointed to administer and direct the program of educational research and development as provided by this act.

10. Review, periodically, the activities of each sponsored project and make to the commissioner of education any recommendations deemed by the members of the board to be appropriate.

11. Recommend to the commissioner of education strategies for implementing on a broader scale findings which have immediate relevance for improving the effectiveness of education in Florida.

12. Review the evaluative data from each sponsored project and at least thirty days prior to the convening of each session of the legislature, file with the commissioner of education for transmittal to members of the state board of education, the president of the senate, the speaker of the house of representatives, the chairmen of the senate and house committees on public school education, a report listing all projects sponsored under the educational research and development program up to that date and pointing out significant and new information, practices, or other benefits which have been accomplished through the program.

(c) *Payment of expenses.*—Members of the board of governors for educational research and development shall not receive a salary but shall be entitled to receive per diem, expenses for travel and honoraria while carrying out official business of the board in ac-

cordance with state law relating to official state travel. The department of education shall approve payment of such expenses and honoraria in accordance with established rules and regulations.

(3) NETWORK OF PARTICIPATING SCHOOLS OF EDUCATIONAL CENTERS.—There shall be established a network of participating schools or educational centers which shall be representative of all levels of public school education, kindergarten through post high school vocational education and which also shall be representative of the various types of student bodies, organizational patterns, staffing patterns, financial support, and types of curricula generally prevalent in Florida.

(a) *Selection of participating schools or centers.*—Based on the priority of projects to be undertaken and the criteria established by the board of governors for educational research and development, the principals and faculties of the schools of the state shall be given an opportunity to file, through the superintendent of schools and district school board, an application seeking to be selected and designated as a participating school or educational center of the state educational research and development program. The advisory council and board of governors shall review the applications, and the board of governors shall recommend to the commissioner of education the schools or centers which in the opinion of the board will best support and serve the purposes of the educational research and development program. From the schools and centers recommended by the board of governors, the commissioner shall designate the schools or centers which shall be eligible to participate in projects sponsored by the educational research and development program provided by this act.

(b) *Number of participating schools or centers.*—The number of participating schools or centers designated by the commissioner of education shall be limited to only those centers actually required to satisfactorily carry out the projects sponsored by this program.

(c) *Waiver of laws or regulations.*—In the event the commissioner of education is provided evidence satisfactory to him that a state board of education regulation will prohibit the success of a project considered to be highly significant to education, the state board of education, upon hearing the evidence and justification presented by the commissioner of education, shall have authority to waive the regulation to the extent necessary for achieving the purposes of the particular project. Any waiver of a regulation authorized by the state board of education shall not be greater than that necessary to insure the success of the project, and such waiver shall not continue beyond the actual period required by the project. Each application filed by a school or center seeking to be designated as a participating school or center shall include an official resolution by the district school board that when projects sponsored in schools or centers operated by that board require waiver of policies or regulations of the district school board, such policies or regulations will be waived in the same manner as prescribed to be followed by the state board of education in waiving regulations. In the event a proposed project will require the waiver of state board of education or district school board regulations, the commissioner of education shall not approve such project prior to receiving evidence of the official action by the state board of education or the district school board that the *impeding regulations have been waived for the purposes of the project.

(d) *Cooperative support of projects.*—Each application for designation as a participating school or center shall include a resolution by the district school board that at least the level of financial support, staff, and other resources as provided for other programs within the district shall be continued for the school or center if it is designated as a participating school or center for the state educational research and development program. Funds available through the educational research and development program authorized by this act shall be used to pay only that cost which is incurred at a participating center which is in addition to the normal cost of operating the program in that district and which costs are a direct result of the state educational research and development project being sponsored in that school or center. Every effort shall be made by the board of governors, the commissioner of education and the district school boards to combine funds available through the educational research and development program with funds from other sources, including both the public and nonpublic sectors, in order to achieve greater cooperation efficiency in the improvement of education.

(4) ORGANIZATIONAL PROGRAM, 1969-1970 FISCAL YEAR.—The program shall become operational at the beginning of the fiscal year following its creation and authorization by the legislature. The 1969-1970 fiscal year shall be used for appointing and organizing the advisory council and the board of governors, employing staff, developing the master plan for the program, and designating participating schools or centers.

History. §§1, 2, ch. 69-401; §§31, 35, ch. 69-106.
*Note. "Impending" changed to "impeding" by the editors.

APPENDIX E

NOTES ON THE FLORIDA EDUCATIONAL RESEARCH AND DEVELOPMENT PROGRAM, 1969-72

This is a summary of the Florida Educational Research and Development Program as it has been conducted from its beginning in July, 1969 until the issuance of the Third Annual Report in January, 1972. The purpose of this summary is to describe the activities which have taken place in terms of the program description set forth in Section 229.561, Florida Statutes.

Program Development

During the fall and winter of 1969-70, nine areas were identified and recommended to the Commissioner of Education as appropriate foci for educational research and development. These nine areas served as the basis for the First Annual Report on the Educational Research and Development Program. That report was issued on February 24, 1970. In the spring of 1970, regional meetings were held in Tallahassee, Orlando, and Miami to review the proposed program with educational researchers, administrators, and teachers. As a result of those meetings and subsequent counsel, recommendations were made to the Commissioner of Education to redesign the program, placing greater emphasis on inter-relating the various types of projects. The aim was to design a program with unity.

During the summer and fall of 1970, the program was redesigned. The Second Annual Report described the new conceptualization of the program. While the projects conducted were essentially the same as those initially proposed, the emphasis on various kinds of projects and the sequence of the activities were modified.

The Second Annual Report illustrated the manner in which the initial operational appropriation of 1.2 million dollars was used to support the principles of state educational leadership emerging from the legislature and from the executive branch of government. These principles were described in the Chapter of the Second Annual Report, "A New State Strategy for Improving Education."

During the spring of 1971 the need for improved management practices in the R & D Program became apparent. While the program had been conceived as a directed research effort, the management practices being followed were similar to the practices in non-directed R & D programs operated by the Department. Thus, the Board of Governors requested a management study. Following the study, procurement practices were strengthened through the use of more detailed specifications. Also, project monitoring was strengthened by placing greater responsibilities on Department staff members coordinating projects. In addition, uniform Technical Standards were adopted (see Appendix G).

Another activitiy to improve R & D management was the development of a master plan for educational research and development in the Department of Education. This was not specifically a responsibility of the R & D Program, but was precipitated by a desire to avoid duplications and provide coordination between the R & D Program and related programs such as Vocational Research and ESEA Title III. A major activity during 1971-72 is the integration of the legislated R & D Program with the other research and development programs in the Department.

The Advisory Council

The statute establishes an Advisory Council which is responsible for nominating members of the Board of Governors and making recommendations to the Board of Governors. The Advisory Council met on the following dates during 1969-70: September 18, September 29, November 5-6, December 5, Feburary 9, April 27-29, and July 9.

The first two meetings were used to nominate members for the Board of Governors. The third meeting was a joint meeting with the Board of Governors to discuss the program. At the fourth meeting the Council reacted to the initial recommendations of the Board of Governors. At the fifth meeting a draft of the First Annual Report was reviewed and recommendations were made.

The April meeting was held in three sections, as Advisory Council members participated in the three regional sessions mentioned earlier. A final meeting of the 1969-70 Advisory Council was held during the summer to discuss the regional meetings and make general recommendations about the R & D Program.

The State Board of Education appointed a new Advisory Council for 1970-71. The new Council was comprised of 9 returning members and 15 new members. The Council met on November 16 and 17, 1970, and January 12, March 11-12, April 29, June 17, July 29, and September 17-18, 1971. At the first meeting, the Council made a critical analysis of the R & D Pr ogram as it was being conducted and adopted recommendations to be submitted to the Board of Governors. At its second meeting, the Council revie ed and revised the recommendations made at the first meeting. A committee was appointed to prese t the recommendations to the Board.

In March, the Council recommended procedures for selecting participating schools, gave major attention to teacher education, and appointed a liaison committee to meet regularly with the Board of Governors. At its April meeting, the Advisory Council reviewed and endorsed the contents of the management study of the R & D Program. In June, the Council reviewed the leadership roles of the Department of Education and its relationship to the R & D Program. The Council also recommended by-laws for the operation of the R & D Program. At its July meeting, the Council reviewed the Master Plan for R & D compiled by the staff of the Department of Education.

The September meeting of the Advisory Council was perhaps its most significant. At the meeting, the Council resolved to assume responsibility for on-site visits to projects, for identifying areas of educational need in Florida and transmitting this information to the Board of Governors, for public relations related to the R & D Program, and for assisting in securing participating schools for the R & D Program.

The 1971-72 Advisory Council was appointed following the September meeting. It is made up of four new members and twelve returning members. The new Council had its first meeting on December 8-9 at which time it recommended participating schools for 1971-72. It also agreed on responsibilities of Council members in visiting R & D projects. In addition, the Council recommended close cooperation between the R & D Program and ESEA Title III.

Board of Governors

The legislation provides for a Board of Governors with membership not to exceed nine persons. This Board is responsible for recommending program guidelines, recommending specific projects, recommending pilot schools, and recommending ways for using the information or products which result from R & D projects. The State Board of Education appointed nine members to the Board of Governors, three for one year, three for two years, and three for three years. Two of the initial members were unable to serve and a third member resigned after two meetings. In February, 1970, two additional members were appointed. The three members who were serving one year terms during 1969-70, were re-appointed to three year terms; the three members whose terms expired in 1971 have also been re-appointed.

During 1969-70, the Board of Governors met on November 5-6, December 7-8, February 9-10, and May 1-2. The first two meetings were devoted to a review of R & D related activities in the Department of Education and to general discussion of the type of educational research and development program which should be recommended. At the third meeting, agreement was reached on the content of the First Annual Report. At the fourth meeting, the Board received the recommendations from the regional meetings conducted by the Advisory Council (described above) and recommended to the Department that the program be organized in a manner which will show the inter-relationship of the various projects.

During 1970-71, the Board of Governors met on the following dates: July 10-11, September 11-12, November 5-6, 1970, and January 29-30, March 12-13, and April 30-May 1, 1971. At the July meeting, the Board reviewed concept papers and specifications for projects prepared by staff members and consultants. Refinements were recommended for the specifications and the papers. At the September meeting, statements from Commissioner Christian and other top officials of the Department of Education were presented to the Board. After discussing the presentations and reviewing program specifications which had been prepared, the Board recommended that applications be solicited immediately from public schools in Florida to develop assessment instruments. At the November meeting, the Board reviewed applications from schools and recommended that the staff proceed to work out contracts for assessment instruments with selected applicants. The Board also recommended that contracts be negotiated with schools, universities, or others for additional R & D projects.

At its January meeting, the Board reviewed the projects which had been initiated. The Board recommended closer communication with the Advisory Council, along with special efforts to inform teachers and educational policy makers about the R & D Program. It also recommended the development of projects to improve teacher education. Finally, the Board reviewed, edited and approved the draft of the Second Annual Report. In March, the Board recommended the development of a programmatic effort in teacher education under the R & D Program. It also recommended a thorough study of the management of the R & D Program in the Department

of Education. At its next meeting (April 30-May 1), the Board reviewed the management study. It endorsed the recommendations and encouraged the Department to implement them. There was a strong recommendation that the R & D staff be strengthened.

In 1971-72, the Board met on July 30-31, September 19-21, and December 10-11. In July, the Board reviewed the Master Plan for R & D in the Department of Education and encouraged its refinement and further development. The Board also reviewed prelimiary reports and products produced under R & D contracts. The Board was critical of the materials provided by the Department as examples of work completed by It was recommended that the Department establish uniform technical standards and monitor the work of contractors much more closely. In September, the Department presented the Board with new technical standards and improved monitoring procedures. The standards were endorsed by the Board. However, concern was expressed over possible fragmentation to the R & D Program. The Department was challenged either to provide a systematic plan showing integration of R & D with other R & D programs in the Department, or to curtail the R & D projects so that new practices in at least one area of the curriculum could be completely implemented under the auspices of R & D. The Board did not wish to develop numerous "program pieces" under R & D which would not be put together in any program.

In December the Board discussed the coordination of R & D with ESEA Title III and other programs and strongly recommended that all R & D programs, including those in the State univerisities, be more closely coordinated. With such coordination the State R & D priorities are more likely to be met. The Board encouraged the further development of teacher education activities under R & D with the addition of a systematic research plan for validating teacher competencies. The Board recommended that the exploration of possible alternative practices be intensified. Finally, the Board nominated participating schools and recommended revisions in the draft of the Third Annual Report.

Network of participating Schools

The legislation provides for a network of participating schools or educational centers. These schools are selected for the purpose of testing and evaluating technicques or products identified or developed under the Educational Research and Development Program. No participating schools were identified during 1970-71. Since the initial focus of the R & D Program was on developing assessment techniques, it was not practical to conduct comparative tests of alternative educational procedures or products until the assessment techniques were developed.

Criteria for selecting participating schools were adopted in 1971. Applications were issued in October for participating school projects in the areas of reading (grades K-6), mathematics (K-2), art (9-12), science (6-9), writing (9 12), and speaking (9-12). Two-hundred-fifty-one applications were received from public and non-public schools. Applications were reviewed by staff members in the Department, by the Advisory Council, and by the Board of Governors. Major attention was given to the applications by the Advisory Council through sub-committees established for that purpose.

During 1972, the participating schools selected will test the independent program assessment system being developed under R & D. This system consists of catalogs of performance objectives with corresponding assessment items, and compatible cost analysis procedures. The assessment system is intended to evaluate the effectiveness of any program using only the objectives which that program is designed to achieve.

Preliminary selections of participating schools have been made. A final selection will be made after the schools are visited and agree to full participation. The schools are listed below:

Art, Grades 9-12:

Godby High – Leon County, Clay High School – Clay County, Jinks Junior High – Bay County, Tampa Catholic – Hillsborough County, Palm Beach Gardens – Broward County, and North Miami Senior High – Dade County.

Communication-Writing, Grades 9-12:

Fort Myers High – Lee County, University School – Leon County, Northeast Senior High – Pinellas County, Jefferson High – Jefferson County, and Stranahan High – Broward County.

Communication – Speaking, Grades 9-12:

Bell High – Gilchrist County, Cocoa High – Brevard County, Florida A & M High – Leon County, South Broward High – Broward County, and Gibbs Senior High – Pinellas County.

Mathematics, Grades K-2:

St. Matthew – Duval County, Hollywood Central – Broward County, Booker-Bay Haven School – Sarasota County, Brooksville Elementary – Hernando County, Oakland Terrace Elementary – Bay County, Peace River Elementary & Pre-School Center – Charlotte County, and Nina Harris Exceptional Child Center – Pinellas County.

Reading, Grades K-6:

Bonifay Elementary – Holmes County, Loretto Elementary – Duval County, Whispering Hills Elementary – Brevard County, St. Cecelia – Pinellas County and Central Elementary – Palm Beach County

Middle School Science:

Miami-Edison Middle School – Dade County, Nims Middle School – Leon County, Sarasota Christian School – Sarasota County, Gulf Breeze Middle School – Santa Rosa County, and Clewiston High School – Hendry County.

APPENDIX F

R & D PROJECTS SUPPORTED IN 1970-71 and 1971-72

Each project supported with funds allocated to the Department of Education for educational research and development under Section 229.561, Florida Statutes, is described below. The purpose of this Appendix is to provide greater detail on the R & D Program which is described in the body of this report; to account for R & D funds; and to respond to Section 229.561(2)(b) 12, Florida Statutes. This Section requires the Board of Governors to submit "a report listing all projects sponsored under the Educational Research and Development Program . . . pointing out significant and new information, practices, or other benefits which have been accomplished due to the program."

The outline for presenting projects is as follows:

100 Projects for clarifying objectives and for developing techniques to assess educational results, resource utilization, and costs

- 101-149 Clarification of objectives; development of pupil assessment techniques
- 150-169 Development of techniques for analyzing and managing educational programs
- 170-179 Development of cost analysis techniques

200 Projects to develop and demonstrate alternative educational practices

300 Projects for program development, management, and coordination

- 310 Advisory Council
- 320 Board of Governors
- 330 Technical support and management
- 340 Feasibility study for R & D Center

400 Projects for improving the capabilities of educational personnel

- 401-419 Identifying competencies of educational personnel
- 420-449 Producing and testing materials for training educational personnel

101 Projects for clarifying objectives and for developing techniques to assess educational results, resource utilization, and costs.

101-149 Clarification of Objectives: Development of Pupil Assessment Techniques

Each of the following projects for developing criterion-referenced assessment techniques follows basically the same design. The facet of the curriculum represented in each project is broken down into its fundamental areas of knowledge or skill. Each of those knowledge or skill areas is divided into its logical sub-areas. In some cases, the sub-areas are sub-divided further. Finally, specific objectives are identified for each of the sub-areas. These objectives are arranged in a catalog which includes, as nearly as practicable, all objectives which might be used in any program within that part of the curriculum. It should be recognized that no single program is expected to include all the objectives. Test items are being produced to measure individual objectives in the catalogs. The test items are criterion-referenced and can be used to determin whether a student does or does not possess the skill or knowledge specified in an objective. The individual projects described represent developmental activities designed to provide the instruments and techniques for assessment procedures which can be used by teachers to manage instruction and by district or state personnel to make decisions regarding the management of the school system.

101 **Art: Neil Mooney, DOE* Coordinator**

Prior Funding: FY 71 (1/71 to 9/71) $15,063
Contractor: Palm Beach County
Product: Catalog of objectives K-12, Criterion-referenced test items, 9-12

Current Funding: FY 72 (1/72 to 8/72) $45,720
Contractor: Palm Beach County
Product: Organize general objectives for grades K-8 into domain chart and produce pre-objectives for grades K-12. The domain must include objectives produced in 1970-71. Revise items produced in 1970-71. Provide technical assistance to participating schools.

102 **Communications Skills:** Mrs. Kittie Mae Taylor, DOE Coordinator

Prior Funding: FY 1971 (1/71 to 12/71) $80,000
Contractor: Broward County
Product: Catalog of objectives in communication skills in grades 9-12. Test items in writing and speaking in grades 9-12.

Current Funding: FY 1972 (1/72 to 9/72) $62,000
Contractor: Broward County
Product: Survey, evaluate and revise available objectives and assessment items in writing K-12. Provide technical assistance to participating schools. Prepare pre-objectives in writing. Produce items for use in 1972-73 state assessment.

103 **Employability Skills:** Jim Davis, DOE Coordinator

Prior Funding: FY 1971 (4/71 to 12/71) $30,890
Contractor: Florida A & M University
Product: Catalog of performance objectives and test items

Current Funding: FY 1972 (1/72 to 9/72) $20,650
Contractor: Florida A & M University
Product: Revise and field test performance objectives and test items. Conduct training programs for teachers in all occupational program areas.

104 **Horticulture:** J. A. Barge, DOE Coordinator

Prior Funding: FY 1971 (2/71 to 12/71) $32,702
Contractor: University of Florida
Product: Catalog of objectives in ornamental horticulture. Test items for the objectives related to initial employability.

Current Funding: FY 1972 (1/72 to 9/72) $22,332
Contractor: University of Florida
Product: Field test to validate objectives and instruments, and to restructure the heirarchy of objectives.

105 **Human Relations Skills:** Dr. Judy Lombana, DOE Coordinator

Prior Funding: FY 1971 (3/71 to 12/71) $15,000
Contractor: Sarasota County School Board
Product: Catalog of performance objectives for K-2.

Current Funding: FY 1972 (1/72 (1/72 to 9/72) $18,673
Contractor: Sarasota County School Board
Product: Completed catalog of goals and pre-objectives to encompass grades K-6. Develop performance objectives and test items for 10% of the K-2 objectives.

106 **Mathematics:** Mrs Renee Henry, DOE Coordinator

Prior Funding: FY 1971 (1/71 to 12/71) $80,000
Contractor: Dade County School Board
Product: Catalog of performance objectives in mathematics, K-2, and corresponding test items.

Current Funding: FY 1972 (1/72 to 9/72) $71,586
Contractor: Dade County School Board
Product: Survey, revise and produce a comprehensive set of pre-objectives for grades K-8. Produce items for 1972-73 state assessment. Furnish technical assistance to participating schools.

107 **Music:** Dr. Fred Vorce, DOE Coordinator

Prior Funding: FY 1971 (9/70 to 6/71) $8,090
Contractor: Non-contracted work carried out within the DOE
Product: Collection of objectives K-12

Current Funding: FY 1972 (7/71 to 6/72) ($15,000)*
Contractor: Non-Contracted; work carried out within DOE
Product: Collection of objectives K-12

108 **Typewriting Communication:** Miss Lucy Robinson, DOE Coordinator

Prior Funding: FY 1971 (1/71 to 12/71) $31,526
Contractor: University of Florida
Product: Catalog of performance objectives with job entry level test items in typewriting skills for business education.

Current Funding: FY 1972 (1/72 to 9/72) $20,060
Contractor: University of Florida
Product: Validate items for job entry. Field test items in schools. Train classroom teachers to use items.

109 **Social Studies:** Miss Pat Spears, DOE Coordinator

Prior Funding: FY 1971 (2/71 to 12/71) $35,000
Contractor: Florida State University
Product: Objectives for the concept "political systems" at high school level, with test items.

Current Funding: FY 1972 (1/72 to 9/72) $30,000
Contractor: Florida State University
Product: Define the domain and develop pre-objectives for grades 1-12 in the following concepts: political systems, man in his habitat.

110 **Science (Middle School):** Jack Hopper, DOE Coordinator

Prior Funding: FY 1971 (3/71 to 12/71) $75,000
Contractor: Florida State University
Product: Catalog of performance objectives with test items for physical science, Middle School.

Current Funding: FY 1972 (1/72 to 7/72) $65,000
Contractor: Florida State University
Product: Catalog of performance objectives with test items for biological, earth-space and marine science, Middle School. Provide technical support to participating schools.

111 **Reading:** Mrs. Martha Cheek, DOE Coordinator

Prior Funding: FY 1971 (3/71 to 12/71) $28,552
Contractor: Center for the Study of Evaluation, UCLA

*Dollars in parenthesis indicate estimated amount

Product: Instruments and procedures for 1971-72 state assessment of reading skills of students at grades 2, 4, 7 and 10

Current Funding: FY 1972 (1/72 to 9/72) $56,200
Contractor: Florida State University
Product: Survey, collect and develop pre-objectives in reading, K-12. Collect and catalog assessment items for the objectives. Provide technical assistance to participating schools.

112 **Learning Skills:** James Eikeland, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) ($30,000)
Contractor:
Product: A survey will be conducted of the state of the art in learning skills instruction and assessment. A domain chart of learning skills will be included in the report of the survey.

113 **Automotive Mechanics:** Robert Collard, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) $36,000
Contractor: University of South Florida
Product: Survey, collect and produce objectives for automotive mechanics. Develop performance objectives and test items for job entry level objectives. Field test. Prepare a plan for revision, further field testing, and dissemination.

114 **Science (Elementary):** Jack Hopper, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) $38,499
Contractor: Escambia County
Product: Produce catalog of pre-objectives for elementary science.

150-169 Development of techniques for analyzing and managing educational programs.

151 **Resource Assessment and Utilization:** William Whaley, DOE Coordinator

Prior Funding: FY 1971 (1/71 to 12/71) $74,740
Contractor: Florida State University
Product: Produce system for analyzing the productivity of educational resources—personnel (including pupils), time, facilities, and media.

Current Funding: FY 1972 (1/72 to 9/72) $75,000
Contractor: Florida State University
Product: Extensive field testing and revision of the system for analyzing educational resources and compatability with program assessment techniques.

152 **A System for Analyzing and Indexing Educational Goals and Objectives:** Lonnie Stanford, DOE Coordinator

Current Funding: FY 1972 (11/71 to 9/72)
Contractor: Non-contracted work carried out within the DOE
Product: Produce a system for analyzing and indexing the contents of all catalogs of objectives produced by the Department of Education. The resulting analyses will show the relationship between objectives in the various catalogs. They will also show the relationships between the objectives and the "goals for public school education in Florida."

170-179 Development of cost analysis techniques

171 **Cost-Determination System:** William Taylor, DOE Coordinator

Prior Funding: FY 1971 (9/70 to 6/71) $18,850
Contractor: Non-contracted; conducted in the Department of Education by the Bureau of School

Finance
Product: New accounting system for public elementary and secondary school districts.

Current Funding: FY 1972 (7/71 to 6/72) $13,450
Contractor: Non-contracted; (same as FY 1971)
Product: Further development and revision of accounting system; supplementary cost analysis system for obtaining cost information not provided by the accounting system; technical assistance to school districts in the use of the accounting system and the supplementary cost analysis system.

172 **Seminars for Local Personnel and Reports on Accounting Capabilities of Local School Districts:** William Taylor, DOE Coordinator

Prior Funding: FY 1971 (6/71 to 10/71) $47,900
Contractor: Robert Davis Associates, Inc.
Product: Design for management seminar (including materials); conduct 10 seminars

Current Funding: FY 1972 (10/71 to 2/72) (R & D portion) $37,604
Contractor: Robert Davis Associates, Inc.
Product: Conduct 15 seminars; analysis of current accounting capabilities of each school district; plan for implementation of new accounting system in each school district.

173 **Computer Program for Use in Cost Analysis:** William Taylor, DOE Coordinator

Current Funding: FY 1972 (2/72 to 7/72) ($15,000)
Contractor:
Product: A computer program which can be used throughout the State for cost analysis.

200 **Projects to develop and demonstrate alternative educational policies.**

The projects under this category examine alternative practices and procedures to increase the productivity of Florida education by increasing learning and/or reducing costs. To increase learning, the projects attempt either to change the instruction, to change the receptivity of the pupils to the instruction, or to change the objectives. To reduce costs, the projects either reduce the services which schools provide to pupils or attempt to increase the efficiency with which services are provided.

201 **Hackett Reading System:** Mrs. Charlotte White, DOE Coordinator

Prior Funding: FY 1971 (12/70 to 11/71) (R & D portion) $135,000
Contractor: Motivation Systems, Inc.
Product: To test the feasibility of using the Hackett Reading System in Florida Public Schools.

202 **Audit of Hackett Reading System:** Cecil Golden, DOE Coordinator

Prior Funding: FY 1971 (12/70 to 12/71) $75,000
Contractor: Florida State University
Product: Audit the results of the feasibility study on the Hackett Reading System.

203 **Individualized Instruction Model:** Joseph W. Crenshaw, DOE Coordinator

Prior Funding: FY 1971 (4/71 to 12/71) $100,000
Contractor: Florida State University
Product: An integrated plan for operating an individualized system of elementary education, including available teachniques and materials and qualitative specifications of components which must be developed for installation of such a system.

Current Funding: FY 1972 (1/72 to 12/72)
Contractor: Non-contracted
Product: The reports are being analyzed in the Department of Education to determine how the results can be implemented in other programs.

204 **Student Participation in Instruction:** Mrs. Blanche McMullen, DOE Coordinator

Prior Funding: FY 1971 (5/71 to 12/71) $22,000
Contractor: Florida Education Association
Product: Techniques for teacher use to involve students in instruction were identified. Training materials for instructing teachers and students in using selected techniques were produced and field tested.

Current Funding: FY 1972 (1/72 to 8/72) $55,000
Contractor: Florida Education Association
Product: Produced materials will be field tested and revised. Available materials to be used by tutors will be identified, reviewed, and cataloged. Teacher training materials will be identified and clustered.

205 **Substituting Non-School Experiences for Regular School Experiences:** James Moore, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) ($17,500)
Contractor:
Product: Present practices will be reviewed and a catalog of these practices will be compiled. Ways to substitute non-school experiences for regular school experiences in order to increase the productivity of the educational system will be recommended.

206 **Increasing the Number of Pupils Which Professional Personnel Can Supervise:** Steve Freedman, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) ($17,500)
Contractor:
Product: Recommended ways to increase productivity of the education system by increasing the number of pupils which professional personnel can supervise, without decreasing learning. Possible alternatives include the use of technology, and the use of para-professionals

207 **Increasing Decision-Making Roles of Parents and Pupils:** Julian Morse, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) ($30,000)
Contractor:
Product: Recommended ways to increase the decision-making role of parents and pupils in selecting curricula and objectives for individual pupils. (This project requires the availability of individualized instruction so that all pupils in a given class need not pursue the same instructional objectives.)

208 **Management Systems for Non-Time-Based Schools:** Ned B. Lovell, DOE Coordinator

Current Funding: FY 1972 (1/72 to 9/72) ($30,000)
Contractor:
Product: Recommended procedures for managing schools so that all pupils are not required to spend equal amounts of time in any given activity.

300 **Projects for program development, management, and coordination**

The projects described in this section support the advisory groups created under Section 229.561, Florida Statutes, and also provide technical and administrative support to the total program.

310 **Advisory Council Activities:** Ned B. Lovel, DOE Coordinator

Prior Funding: FY 1971 (7/70 to 6/71) $6,630
Current Funding: FY 1972 (7/71 to 6/72) ($11,500)

320 **Board of Governors Activities:** Ned B. Lovell, DOE Coordinator

Prior Funding: FY 1971 (7/70 to 6/71) $17,953
Current Funding: FY 1972 (7/71 to 6/72) ($19,000)

330 **Technical support and management**

331 **Dissemination of Information:** Mrs. Nancy Benda, DOE Coordinator

Prior Funding: FY 1071 (3/71 to 11/71) $6,050
Contractor: Franceschi Advertising, Inc.
Product: A slide-tape presentation describing Florida's R & D Program

Current Funding: FY 1972 (1/72 to 9/72) ($35,000)
Product: Production of a dissemination-public information model.

332 **Determine Readability Level:** Mrs. Nancy Benda, DOE Coordinator

Prior Funding: FY 1971 (9/70 to 6/71) $1,250
Contractor: Professional Reading Techniques, Inc.
Product: Report on the readability level of state adopted textbooks.

333-336 **Technical Assistance in Development of Criterion-Referenced Test Exercises:** Ned B. Lovell, DOE Coordinator

Prior Funding: FY 1971 (1/71 to 9/71) $58,050
Contractor: Florida Board of Regents
Product: Technical assistance to all contractors producing assessment instruments and procedures for the R & D Program, to insure quality and compatability among products.

Current Funding: FY 1972 (9/71 to 8/72) $66,514
Contractors: Florida A & M University, Florida State University, Florida Atlantic University
Product: Continuation of technical assistance.

337 **Consultation and Technical Support in Developing Performance-Based Teacher Education Programs:** Ned B. Lovell, DOE Coordinator

Prior Funding: FY 1971 (5/71 to 12/71) $14,078
Contractor: Florida A & M University
Product: Technical assistance and coordination of developmental activities for implementing performance-based teacher education programs.

Current Funding: FY 1972 (1/72 to 9/72) (Federally Funded)
Contractor: Florida A & M University
Product: Continuation of technical assistance and coordination.

338 **Management Study and Management Support for R & D Program:** Mrs. Nancy Benda, DOE Coordinator

Prior Funding: FY 1971 (4/71 to 11/71) $19,046
Contractor: General Electric Company
Product: Conduct a management study and systems analysis of the Florida Educational Research and Development Program; train DOE personnel to implement recommended procedures.

340 **Feasibility Study for an R & D Center:** Dr. Lorraine Gay, DOE Coordinator

Current Funding: FY 1972 (8/71 to 12/72) $37,750
Contractor: University of West Florida

Product: Report of the feasibility of establishing an R & D Center at the University of West Florida.

400 **Projects for improving the capabilities of educational personnel.**

Projects listed in this section are designed to identify competencies needed by educational personnel, produce assessment procedures and training materials for educational personnel, and validate the need for identified competencies through research.

401-419 **Identifying competencies of educational personnel**

401 **Catalog of Teacher Competencies:** Mrs. Pauline Masterton, DOE Coordinator

Prior Funding: FY 1971 (5/71 to 12/71) $33,000
Contractor: Florida State University
Product: Produce a non-prescriptive catalog of teacher competency statements; conduct regional seminars to introduce catalog to teacher educators and obtain critiques.

Current Funding: FY 1972 (1/72 to 9/72) ($30,000)
Contractor: Florida State University
Product: Revise catalog; provide technical assistance to institutions and school districts in the use of the catalog for program analysis.

420-449 **Producing and testing materials for training educational personnel**

421 **Teacher Training Slide/Tape Presentation:** Mrs. Pauline Masterton, DOE Coordinator

Prior Funding: FY 1971 (4/71 to 12/71) $7,118
Contractor: General Electric Company
Product: A slide/tape presentation explaining Florida's program for improving teacher education.

422 **Center for Reproduction and Distribution:** Mrs. Pauline Masterton, DOE Coordinator

Prior Funding: FY 1971 (6/71 to 12/71) $4,500
Contractor: Panhandle Area Educational Cooperative
Product: Print and non-print materials for training educational personnel (in public domain) available for purchase at nominal cost.

Current Funding: FY 1972 (1/72 to 9/72) ($3,000)
Contractor: Panhandle Area Educational Cooperative
Product: Continuation of project.

423 **Center for Collecting and Reviewing Teacher Training and Protocol Materials:** Jerry Chapman, DOE Coordinator

Prior Funding: FY 1971 (6/71 to 12/71) $14,708
Contractor: University of Miami
Product: Develop review procedures, train reviewers, conduct reviews.

Current Funding: FY 1972 (1/72 to 9/72) $30,238
Contractor: University of Miami
Product: Train reviewers, conduct reviews and provide reviews for distribution center.

424 **Teacher Training Procedures for Transforming Classroom Instruction to a Performance-Objective Basis (CCC Project):** Fred Daniel, DOE Coordinator

Prior Funding: FY 1971 (6/71 to 12/71) (R & D portion) $41,361
Contractor: Florida Board of Regents

Product: Replicable procedures and materials for training reading teachers to use catalogs of objectives and assessment items being developed in R & D Projects.

Current Funding: FY 1972 (2/72 to 9/72) ($25,000)
Contractor:
Product: (The project will be broadended and generalized to areas other than reading.) Assessment techniques to measure competencies needed by teachers to use catalogs of objectives and assessment items produced in R & D projects (with emphasis on transforming classroom instruction to a performance-objective basis); performance-based teacher training materials to help teachers develop those competencies.

425 **Design Training Program for Community School Directors:** Julian Morse, DOE Coordinator

Prior Funding: FY 1971 (1/71 to 12/71) $42,082
Contractor: Florida Atlantic University
Product: Design and demonstrate a replicable training program for community school directors which can be offered by institutions in the State University System of Florida.

426 **Teacher Assessment and Training Techniques for Middle School: John W. Patrick, DOE Coordinator**

Current Funding: FY 1972 (2/72 to 9/72) ($25,000)
Contractor:
Product: Assessment techniques to measure middle school teacher performance; performance-based modules for training middle school teachers.

427 **Assessment Materials and Training Materials for Developing Human Relations Skills in Teachers:** DOE Coordinator

Current Funding: FY 1972 (2/72 to 9/72) ($25,000)
Contractor:
Product: Hierarchy of teaching competencies for human relations; assessment techniques for measuring human relations competencies; individualized modules for training teachers in human relations skills.

428 **Educational Management Techniques for School Administrative Personnel: DOE Coordinator**

Current Funding: FY 1972 (2/72 to 9/72) ($25,000)
Contractor:
Product: Comprehensive list of school managemnt competencies related to analysis and management techniques being produced under the R & D Program; assessment techniques to measure selected management skills; individualized materials for training school management personnel in selected skills.

APPENDIX G

TECHNICAL SPECIFICATIONS FOR CATALOGS OF OBJECTIVES AND ASSESSMENT ITEMS

A major action taken under the Educational Research and Development Program during 1971-72 was the adoption of uniform technical standards which are being applied to all projects for developing pupil assessment techniques. The standards, as recommended by the Board of Governors, are as follows:

1.0 Standards Applicable to Exploratory Developmental Projects

Exploratory developmental projects leading toward techniques for assessing pupils learning may have three major products: a structure for organizing objectives, a survey of available objectives and assessment items, and a comprehensive set of objectives defining the domain of interest.

1.1 Structure

The first type of product from an exploratory developmental project is a structure for organizing objectives which will accommodate the performance objectives and assessment items which make up the domain encompassed by a given curricular area. This product may take one of several forms such as a table of specifications, domain map or hierarchical system but in all cases it must:

1. accomodate within its structure all objectives in the domain.
2. easily facilitate the retrieval or location of any of its component objectives.

1.2 Survey

The second type of product from an exploratory developmental project is a "state of the art" survey. This is a survey of available objectives and assessment items which have been produced in other projects (conducted anywhere under any auspices) to determine the scope and quality of objectives and assessment items which are already available.

In contracts requiring review of the literature or "state of the art" surveys it is intended that the contractors examine all available collections of objectives, regardless of origin, which concern the domain of contractual interest. Said objectives are to be subjected first to content analysis. Those objectives which are found to be pertinent to the domain, and not previously identified, should be examined for technical quality, revised to meet technical standards (either as pre-objectives or performance objectives), and added to the contractor's collection. A report listing the sources examined is to be furnished to the assigned DOE Coordinator by the contractor. It is the responsibility of the DOE Coordinator to certify as to the sufficiency of the review or to recommend modification of the report and/or additional sources for examination. The report is to include at least the following elements on each document or source reviewed: a bibliographic reference; a brief evaluation of the pertinence and quality of the examined material; and a statement indicating the extent to which the project has utilized the materials.

1.3 Set of Pre-objectives

The third type of product from an exploratory development project is a set of objectives, either selected from those produced in other projects, or constructed, which define the domain of interest in terms of the action required of the learner. Each objective must contain the following identifiable elements:
(a) situation—the circumstances under which the action is to be carried out, (b) action—what the learner is to do, (c) object—what the learner acts on, (d) limits—an indication of the extent of the task.

> Example: In the following example each of the above elements is identified. (a) Given an outline map of Europe the student will (b) identify (d) the major (c) linguistic zones .

The term pre-objective is used to designate objectives such as the above; this is intended to distinguish this class of objective from the performance objective discussed below. Pre-objectives must possess the following qualities: (a) pertinence—professionals will agree that the objective is properly included in the domain of interest, and (b) utility—professionals will agree that the objective can and should be used by at least some

students in Florida schools. (Note: The contractor is *not* required to employ the illustrated objective format.)

The complete set of objectives must possess the following qualities:

1. Comprehensiveness—Professionals will agree that the set does define the domain of interest, (that is, that all needed objectives are included), and
2. Florida accreditation standards—The complete set includes those objectives which are required by the applicable State Accreditation Standards.

The professional judgments listed above will ordinarily be made by representative committees of Florida teachers and area specialists especially convened for this purpose.

2.0 Standards Applicable to Product-Oriented Development Projects

A product-oriented development project is intended to produce products for use in three pre-specified educational situations. A project of this type should produce performance objectives and assessment items which can be used (a) in state assessment, (b) in assessment of individual programs or projects, and/or (c) by classroom teachers for managing instruction. A product-oriented development project builds upon an exploratory development project. The performance objectives and assessment items produced should meet the specifications given below.

2.1 Performance Objectives

Definition: A performance objective is a statement in precise, measurable terms of a particular behavior to be exhibited by the learner under specified conditions. It possesses each of the elements or characteristics specified below:

1. Situation—The situation confronting the learner is clearly specified, including the mode in which stimuli are to be presented.

2. Action—The action required of the learner is unambiguously defined, including the mode in which responses are to be made.

3. Object—The object on which the learner is to operate (i.e., the object of the action) is clearly stated.

4. Limits—The particular limits of the activity expected of the learner are specified.

5. Measurability—The verb phrase depicts how the learner's attempt to accomplish the objective can be assessed.

6. Communicability—The objective is so stated that one, and only one, interpretation of the objective is reasonably possible.

7. Criterion—The degree of proficiency required as evidence of accomplishment by a student of the objective is indicated. (The criterion may be indicated implicitly or explicitly. If implicit, 100% accuracy is effectively designated. If explicit, may be appended parenthetically to the statement of the objective.)

2.3 Criterion—Referenced Test Items (Exercises)

Definition: A criterion-referenced test item is an item based upon a performance objective and is designed to allow the determination of whether or not the learner has accomplished the objective. It possesses each of the characteristics specified below:

1. Congruence—The task specified in the item corresponds directly to the performance specified in the objective, including the situation, action, object and limits.

2. Comprehensibility—The item-specified task is so stated or portrayed that the learner clearly understands what is expected of him.

3. Objectivity—The item is stated in such a way that all competent observers (evaluators) can make a clear and unequivocal decision as to whether or not the learner has demonstrated an acceptable performance.

4. Integrity—The item should be structured in such a way that an acceptable response to the item constitutes sufficient evidence, in and of itself, that the learner has accomplished the corresponding objective. (Integrity must pertain to an item whenever feasible. Responsibility for demonstrating infeasibility rests with the producer of the item.)

5. Equivalence—If two or more items correspond to a single objective, each item in the set should be a true alternate, in that a student who passes (or fails) one item on a given occasion would be expected to pass (or fail) any other item in the set.

APPENDIX H

POLICY FOR BUDGETING STATE SUPPORT FOR EDUCATIONAL RESEARCH AND DEVELOPMENT PROJECTS IN THE STATE UNIVERSITIES

Introduction

Under Section 229.561, Florida Statutes, the Commissioner of Education is charged with the responsibility for operating an Educational Research and Development Program. The Florida Legislature has appropriated funds to support a portion of this program. These funds have been appropriated to the Division of Elementary and Secondary Education which has the responsibility for administering the program.

In most cases, educational research and development projects supported with these funds are not actually conducted in the Division of Elementary and Secondary Education. Often, they are conducted in one of the State Universities.

Policy

In allocating funds to State Universities for R & D projects, it is the intention of the State Board of Education and Commissioner of Education to support only the additional direct costs incurred by a university which cannot be covered within its budgeted funds. No funds shall be allocated for indirect costs or for supporting services which are already provided through state allocations. However, when it is necessary to curtail regular state line services by reassigning personnel to Department of Education research and development projects, it will be permissable to use state R & D funds to provide replacement personnel to maintain regular services at their normal level.

Agreements shall be drafted between the Division of Elementary and Secondary Education and the Division of Universities, except for projects to be administered by Divisions of Sponsored Research authorized under Section 241.621(4), Florida Statutes, in which case the Agreement may be executed directly with the Division of Sponsored Research. These Agreements will provide only for reimbursement of expenses actually incurred in conducting a project. The expenditures described below shall be allowable.

Salaries - Salaries of professional and clerical personnel actually assigned to the project may be supported out of project funds during the contract period, provided that persons being paid are not employed on state line positions.

Other Personal Services - Consultants may be employed to assist in carrying out a project using project funds.

Personnel may be employed to carry out the duties of employees on state lines during the time when those employees are serving on Department of Education research and development projects.

Expenses - Project funds may be used for staff travel, consultant travel, printing, supplies, office rental, and other items required to carry out the project.

Operating Capital Outlay - In general, capital equipment may not be purchased with R & D funds. If capital equipment required to carry out the project is not available, it should be secured on a loan or rental basis. If it is demonstrated that purchase is more economical than rental, capital equipment may be purchased. However, all purchases must be fully explained in advance and will be allowed only if advance written approval is granted by the administrator of the Educational Research and Development Program in the Division of Elementary and Secondary Education.

Approved by State Board of Education December 9, 1971
(Date)

Signed Floyd T. Christian
Commissioner of Education

12/9/71
Date

APPENDIX I FUND SOURCES FOR EDUCATIONAL RESEARCH AND DEVELOPMENT IN THE DEPARTMENT OF EDUCATION

Project Areas	Who Can Conduct Projects			Formal Advisory Structure		ADMINISTERED BY					FUND SOURCE			PROGRAM				FOCUS			1971-72 Budget for R & D and R & D Admin.	Proportion of 1971-72 Budget Used for R & D (%)	Statutory Authorization
	Pub. Sch. Dist.	Colleges & Univ.	Private Ind. & Corp.	External to DOE	Internal to DOE	Commissioner's Staff	Comm. Colleges	Elem. & Sec.	Voc.-Technical	Universities	State	Federal	Other	Specified Curriculum Area	Specified Techniques	Specified Aspects of Educational Admin.	Specified Segment of Population	Basic Research	Applied Research	Development Research			
ESEA Title V	X	X	X		X	X						X				X				X	298,786	37	Sec.503 PL 89-10
Legislated Educational R & D	X	X	X	X				X			X								X	X	1,350,000	100	229.561
ESEA Title III	X			X				X				X		X	X					X	3,319,486	100	P.L. 90-247
MIGRANT	X	X	X					X					X				X			X	150,000	2	PL 89-10: 89-750
ESEA Title IV	X	X	X		X			X				X				X			X	X	115,145	100	PL 90-247
Educational Television & Radio	X	X	X	X				X			X		.	X	X	X	X		X	X	221,000	64	230.59-68 240.04
Environmental Education	X	X	X	X				X			X			X						X	15,000	17	229.8055
ESEA Title VI	X			X				X				X					X		X	X	821,515	88	PL 91-230
Fla. Lrng. Resources System	X	X	X	X				X				X					X			X	41,024	100	PL 91-230
Flexible Staffing	X							X				X				X				X	220,000	100	229.801 935
Drug Education	X	X	X					X			X	X		X					X	X	12,000	9	229.8055
Food & Nutrition	X	X	X	X	X			X				X	X	X		X:	X		X	X	243,900	1	PL 91-248
School Facilities	X	X		X				X			X				X	X				X	48,400	6	235.01-235.40
Vocational Research & Evaluation	X	X	X	X	X				X			X						X	X	X	1,455,816	100	PL-90-576 PL-89-10 PL-90-247
Community Colleges	X	X	X		X		X			X		X		X		X				X	19,852	1	PL 89-10
Research Positions in Colleges of Ed.		X								X	X			X	X	X	X	X	X		1,800,000		